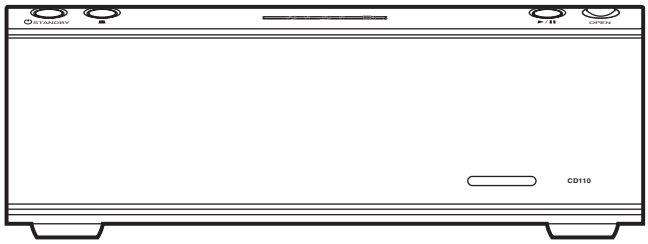
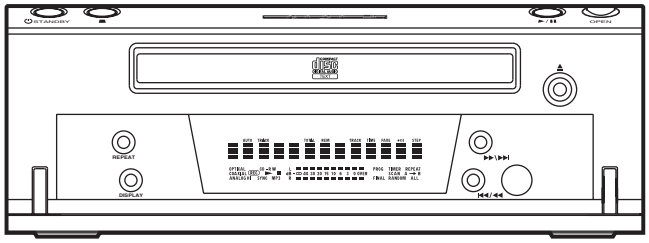
Service Manual

CD110 /F1S, /N1S, /U1S

CD Player





COMPACT disc DIGITAL AUDIO

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CD110

Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

CD110

326W855010 MIT
3120 785 22720
First Issue 2001.11

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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MARANTZ AMERICA, INC.
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MARANTZ PROFESSIONAL PRODUCTS
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PHONE : +61 - (0)3 - 9543 - 1522
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THAILAND

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WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
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FAX : +66 - 2 - 224 6795

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WO KEE HONG DISTRIBUTION PTE LTD
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#03-02 OLIVINE BUILDING
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SUITE 8.1, LEVEL 8, MENARA GENESIS,
NO. 33, JALAN SULTAN ISMAIL,
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PHONE : +60 3 - 2457677
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東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

Audio Characteristics

Channels	2 channels
Frequency range	20Hz-20kHz
Dynamic range	> 90 dB
S/N ratio (WTD)	87 dB
Channel separation (1 kHz)	87 dB
THD (1 kHz)	0.02 %
Wow & flutter	Precision of quartz
Error correction	Cross-interleave read solomon code (CIRC)
Analog output	2.0 Vrms
Digital output (Coaxial)	0.5 Vp-p/75 ohms
Digital output (Optical)	-20 dBm

Optical Readout System

Laser	GaAlAs semiconductor
Wavelength	780 nm

Signal System

Sampling frequency	44.1 kHz
Quantization	16-bit linear/channel

Others

Power Supply	AC 230 V 50 Hz (N version) AC 100V 50 / 60Hz (F version) AC 120 V 60 Hz (U version)
Power Consumption	13 W(0.16 A)

Cabinet, etc.

Dimensions (W x H x D)	210 x 71.5 x 310 mm (8-1/4 x 2-3/4 x 12-3/16 inches)
Net weight	3.1 kg (6.8 lbs)
Operating temperatures	+5℃ ~ +45℃
Operating humidity	5 % ~ 90 % (without dew)

Accessories

Remote control unit (RC110CD)	1
Dimensions (W x H x D) MAX	50.5 x 154.5 x 25 mm (2-1/2 x 6-1/4 x 1 inches)
Weight	60 g (0.13 lbs)
AA type Batteries	2
Stereo audio cable	1 pair
Remote cable	1

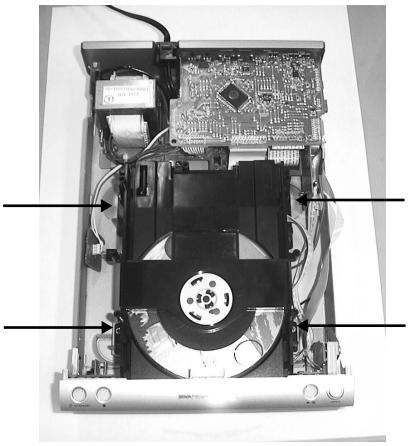
Specifications subject to change without prior notice.

2. SERVICE MODE

Service Mode

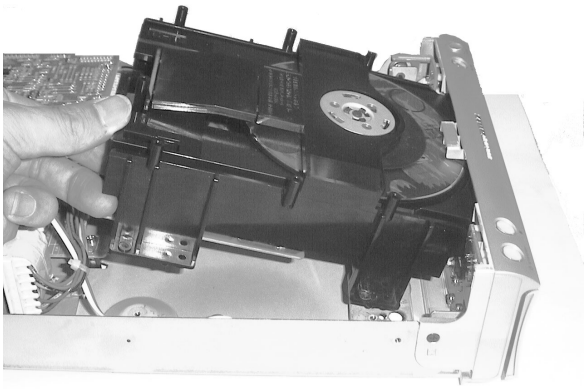
1. While Mains cord is disconnected, press **STOP** Button on the unit and plug in the Mains cord.
2. Version number of the front micom software is displayed.
3. Press **FF/NEXT** Button(>>/>>|) then Display segment test begins.
4. First all the segments will light and then a segment turns off one by one.
5. Disconnect Power cord to quit service mode.

Emargency Eject



1. Remove 5 screws on the top cover and remove the top cover.

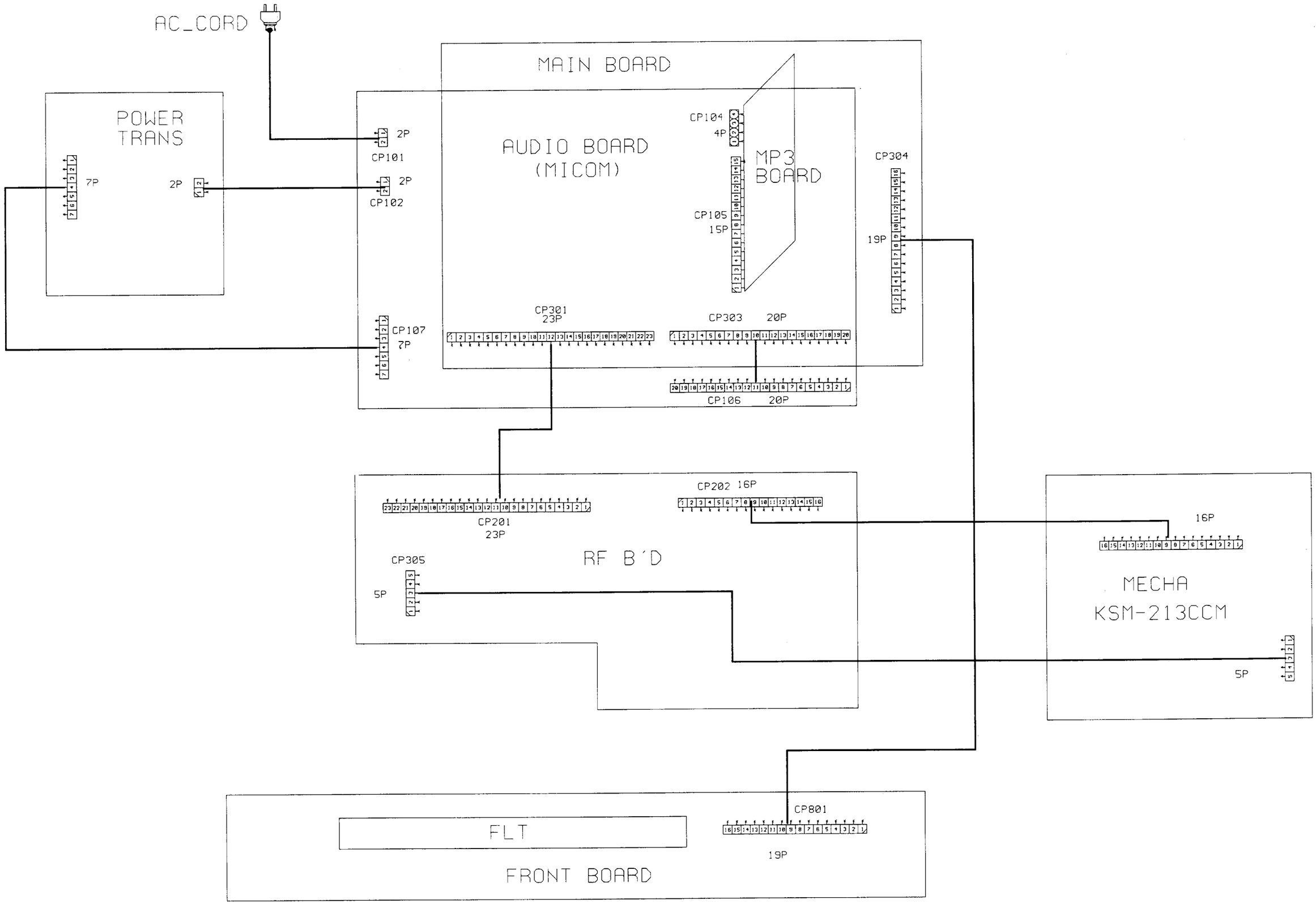
2. Remove 4 screws pointed with the arrows.



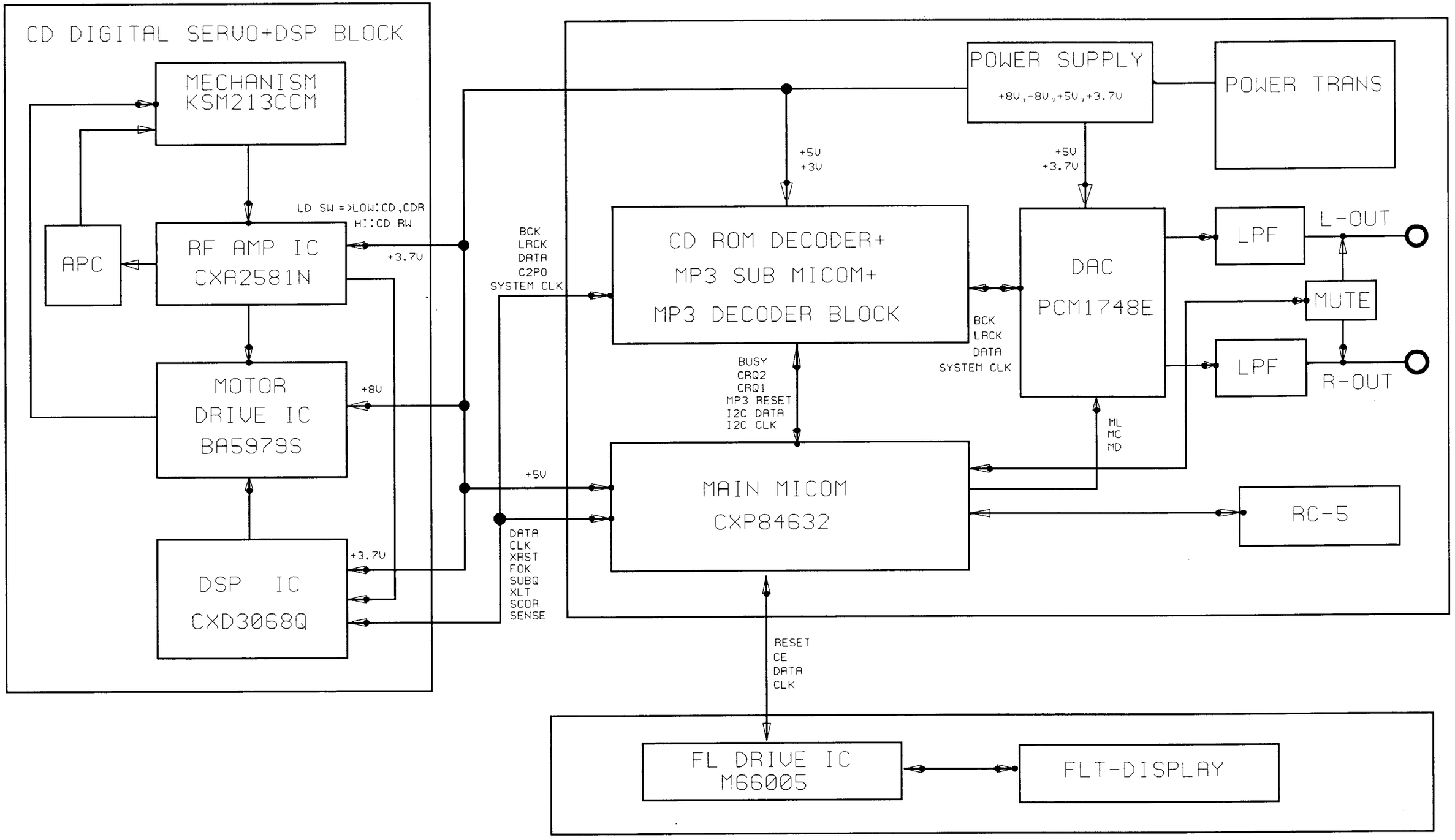
3. Remove the CD drive mechacomponent.
(Lift up backside of the component and pull it backward so that the component is apart from the unit.)

4. Turn the gear to the direction shown with your finger and disc tray will be opened.

3. WIRING DIAGRAM

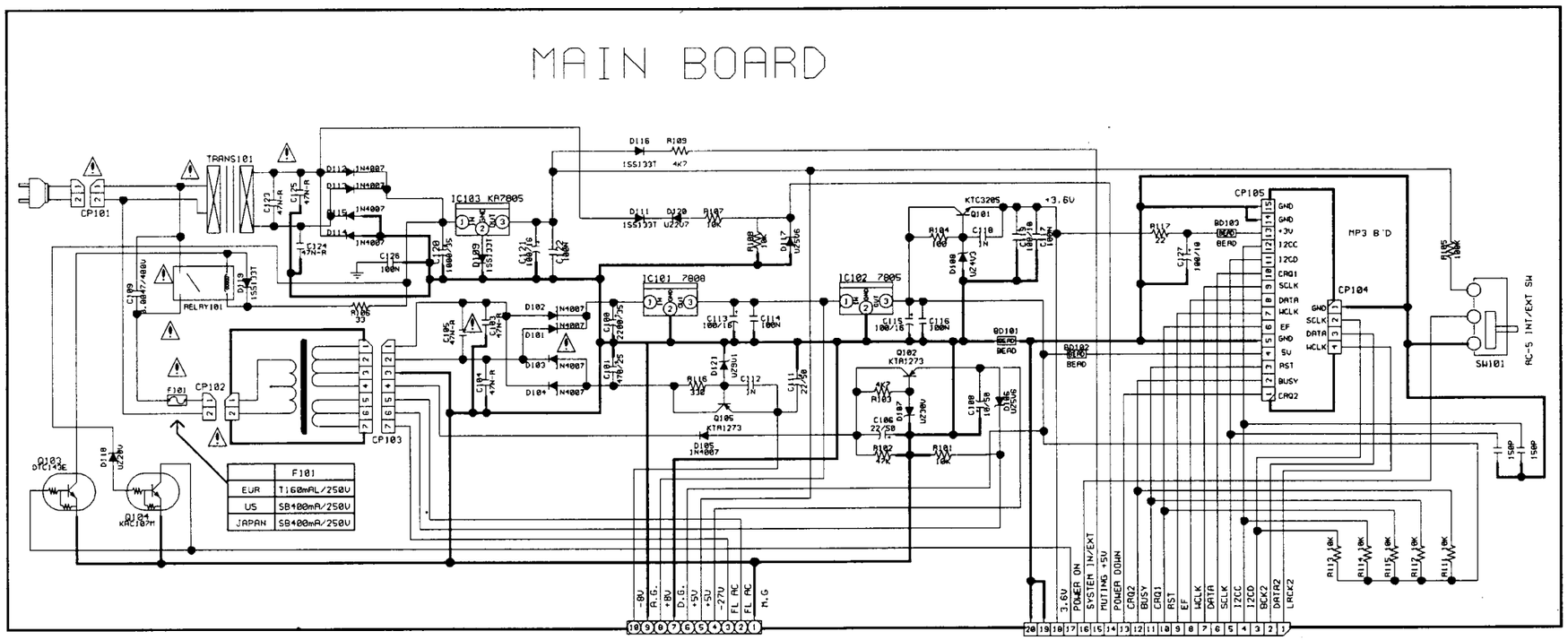


4. BLOCK DIAGRAM

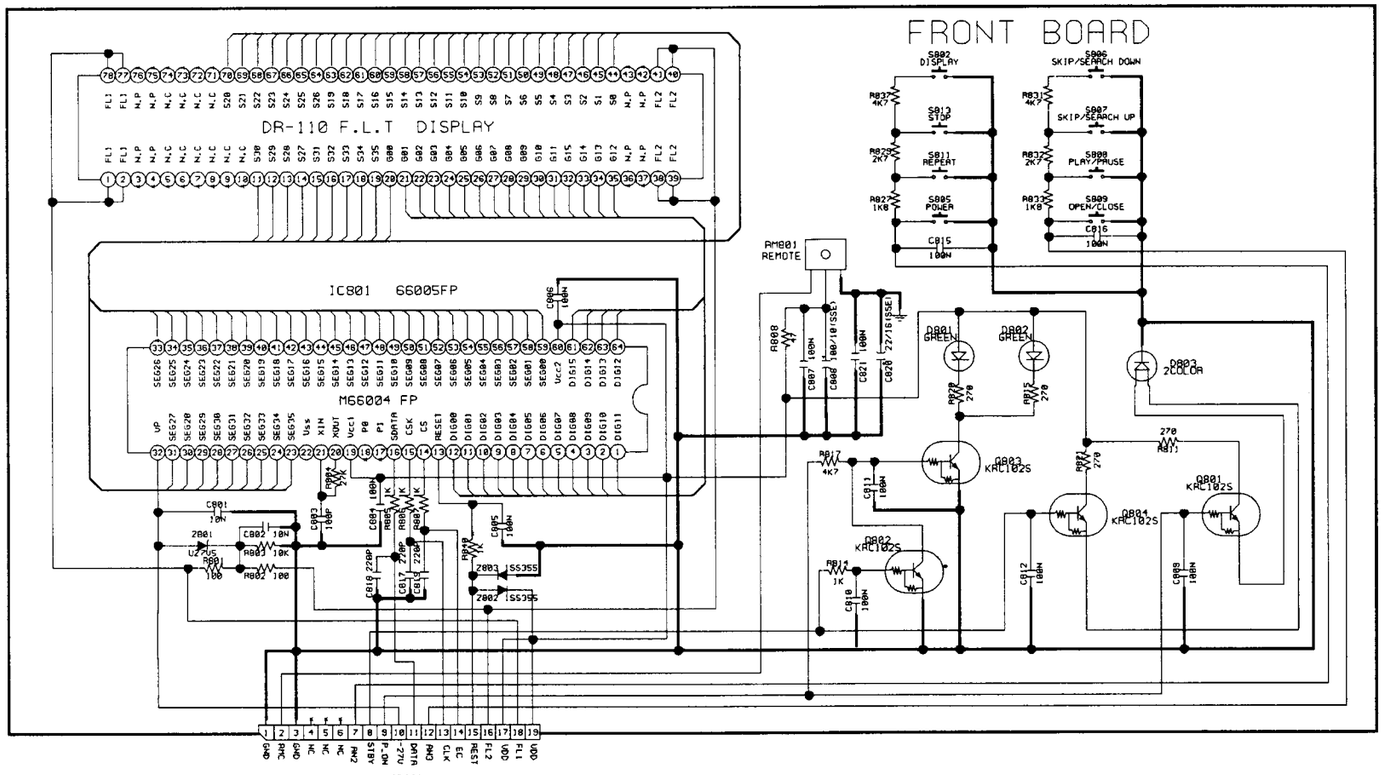


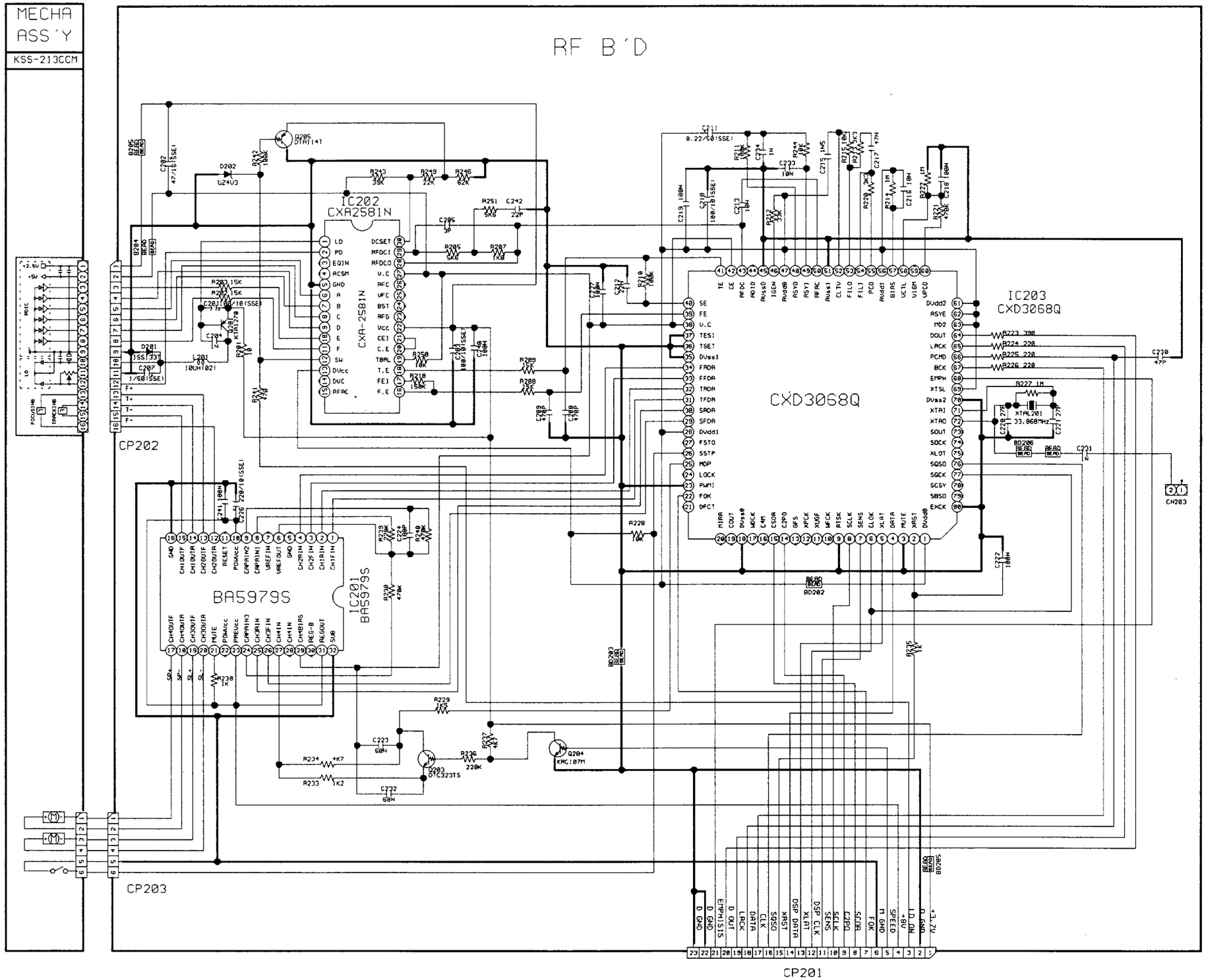
5. SCHEMATIC DIAGRAM

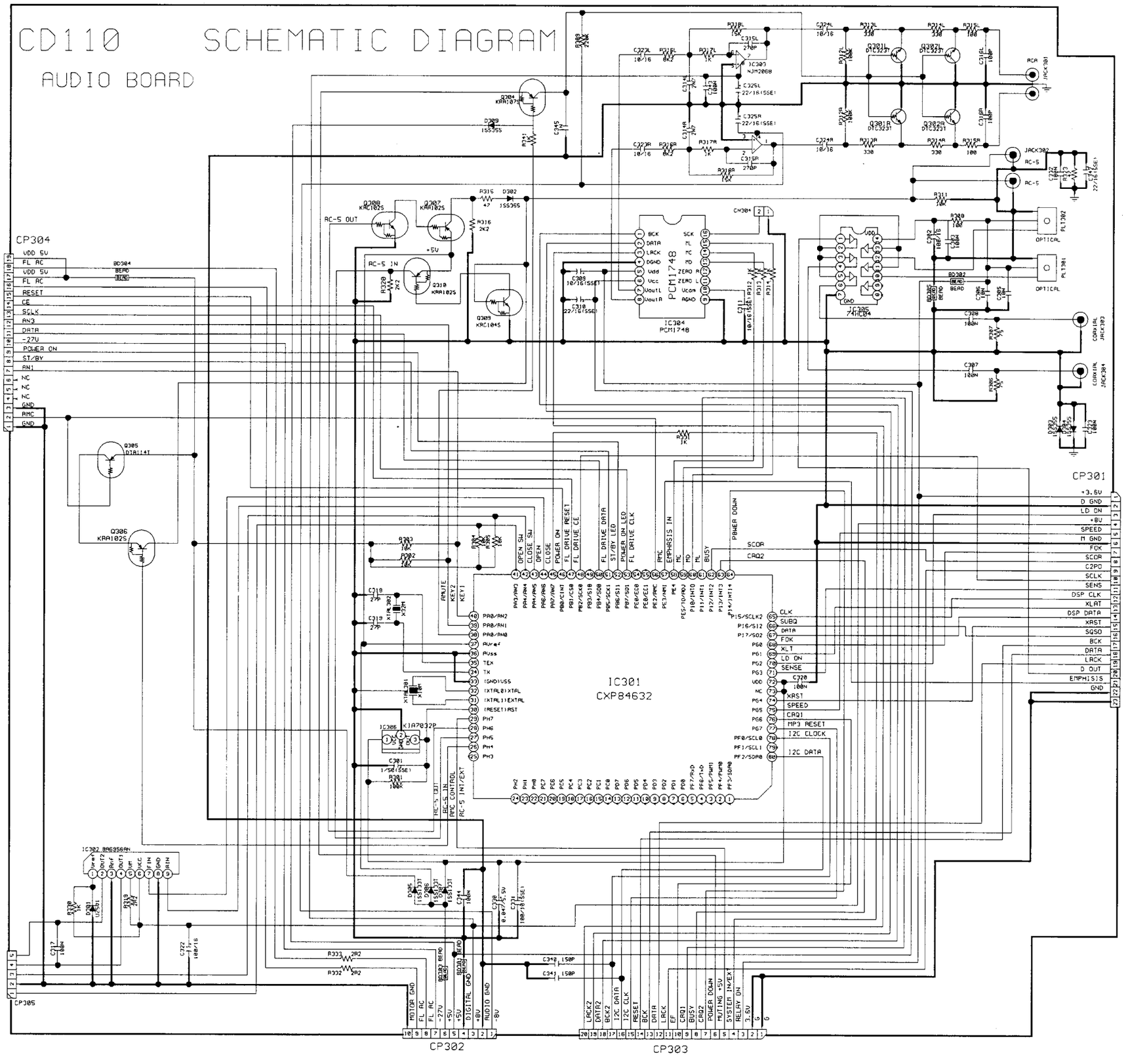
MAIN BOARD



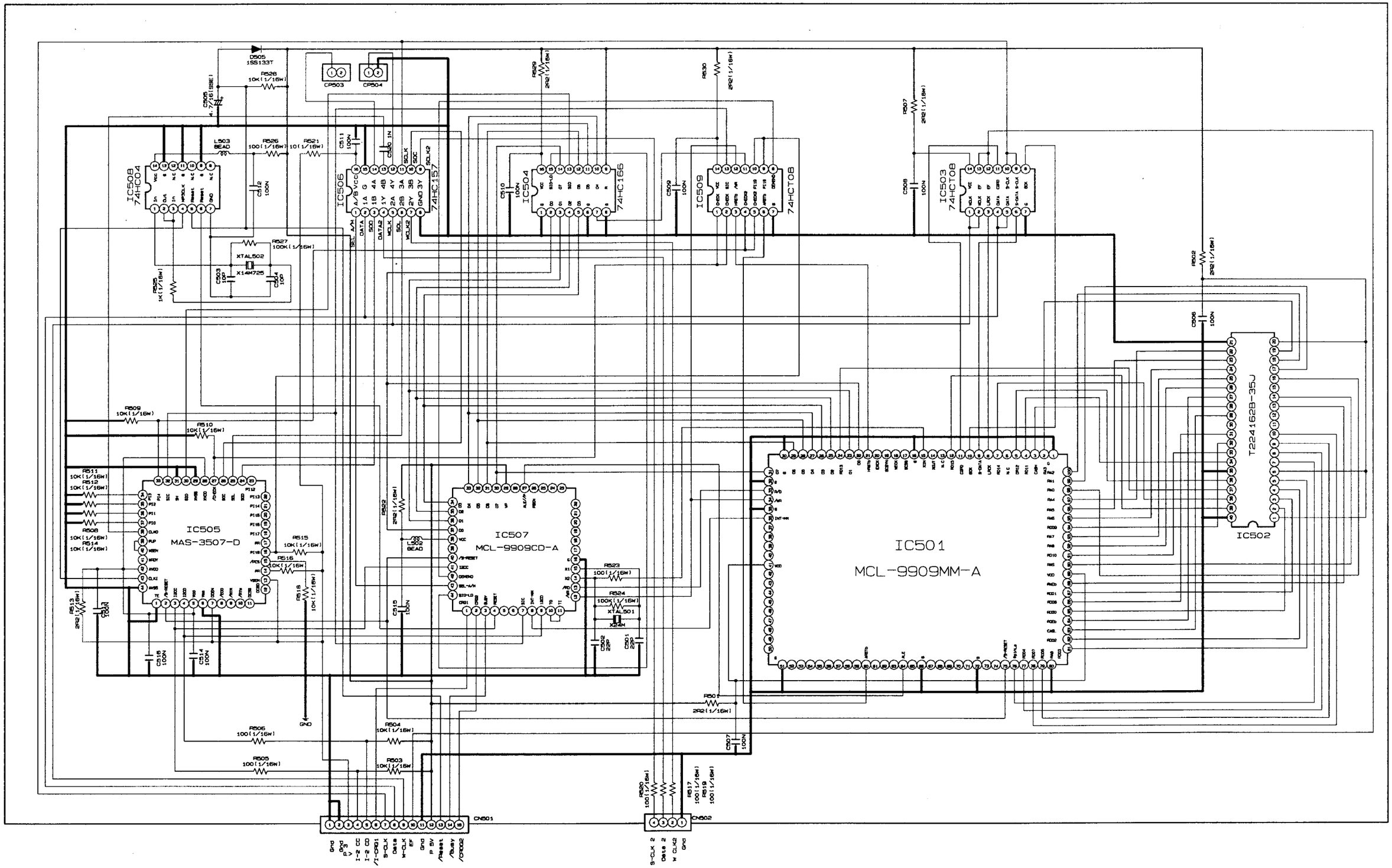
FRONT BOARD




MECHA
ASS´Y
KSS-213CCM
RF B´D
IC202
CXA2581N
CXA-2581N
IC203
CXD3068Q
CXD3068Q
IC201
BA5979S
BA5979S
CP202
CP203
CP201
CN203
Q205
DTA114T
Q204
KRC187M
Q203
DTC323TS
D202
D201
XTAL201
33.8688MHz

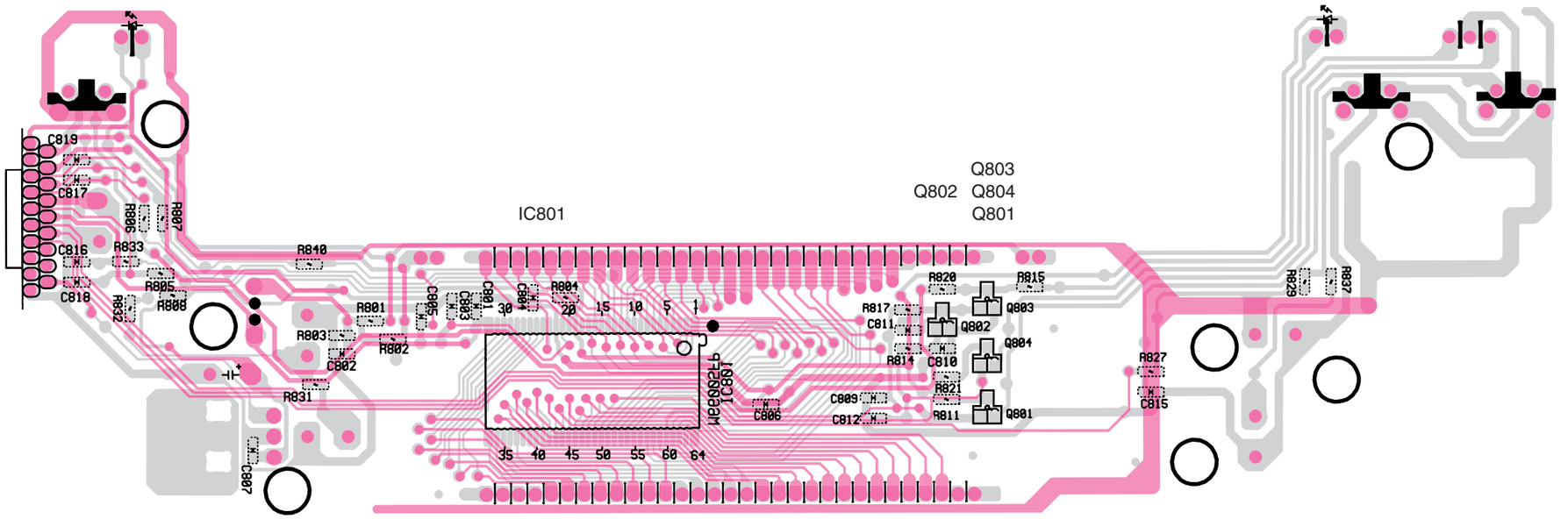

CD110 SCHEMATIC DIAGRAM
AUDIO BOARD
CP304
VDD 5V
FL AC
VDD 5V
FL AC
RESET
CE
SCLK
AN3
DATA
-27V
POWER ON
ST/BY
AN1
NC
NC
NC
GND
RMC
GND
IC304 PCM1748
IC305 74HC04
IC301 CXP84632
IC302 BA6356AN
CP301
+3.6V
D GND
LD ON
+8V
SPEED
M GND
FOK
SCOR
C2PO
SCLK
SENS
DSP CLK
XLAT
DSP DATA
XRST
SQSO
BCK
DATA
LRCK
D OUT
EMPHASIS
GND
CP305
CP302
CP303
OPTICAL
RCA
AC-5 OUT
AC-5 IN
+5V
MOTOR GND
FL AC
-27V
+5V
+5V
DIGITAL GND
+8V
AUDIO GND
-8V
I2C DATA
I2C CLK
MUTING +5V
SYSTEM IN/EX
RELAY ON
3.6V

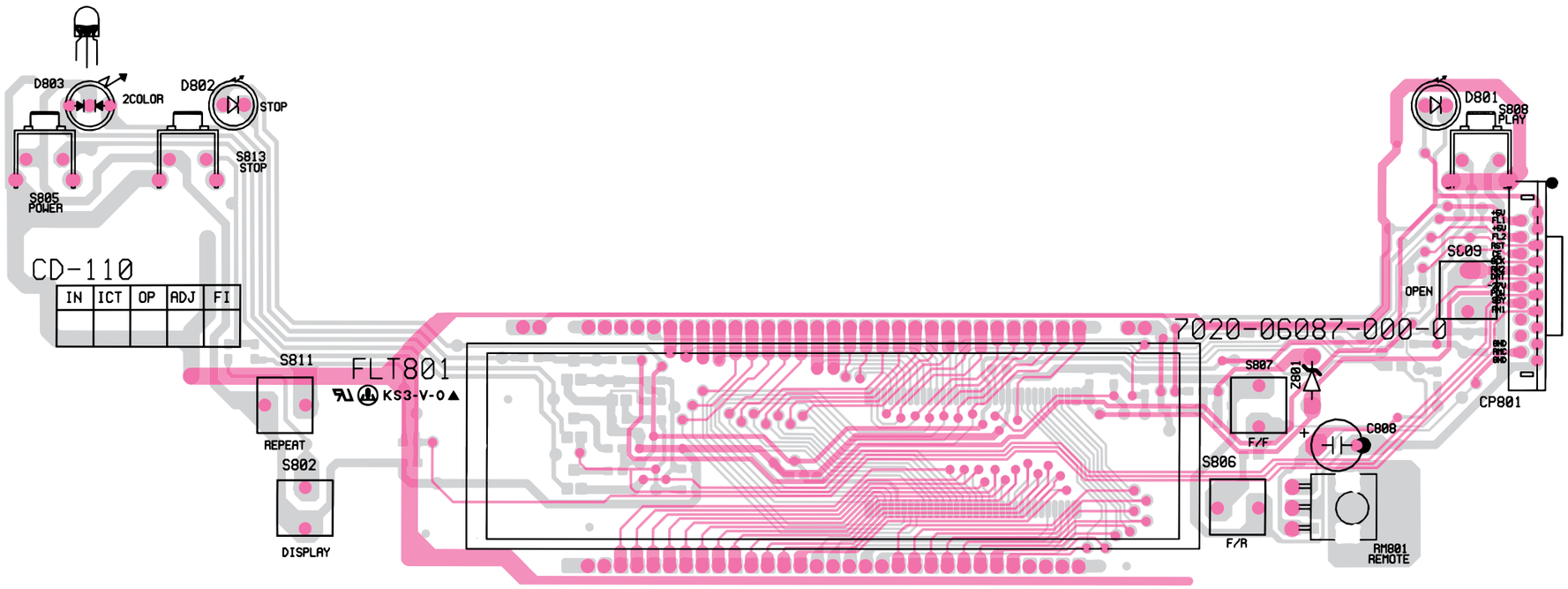
MP3 BOARD


IC501
MCL-9909MM-A
IC502
T2241628-35J
IC503
74HCT08
IC504
74HC166
IC505
MAS-3507-D
IC506
74HC157
IC507
MCL-9909CD-A
IC508
74HC04
IC509
74HCT08
D505
1SS133T
R528
10K(1/16W)
CP503
CP504
L503
BEAD
R526
100(1/16W)
R521
10(1/16W)
C512
100N
C511
100N
C505
4.7/16(SSE)
R527
100K(1/16W)
XTAL502
X14M725
C503
15P
C504
15P
R525
1K(1/16W)
R529
2R2(1/16W)
R530
2R2(1/16W)
C510
100N
C509
100N
R507
2R2(1/16W)
C508
100N
R502
2R2(1/16W)
C506
100N
R509
10K(1/16W)
R510
10K(1/16W)
R511
10K(1/16W)
R512
10K(1/16W)
R508
10K(1/16W)
R514
10K(1/16W)
R515
10K(1/16W)
R516
10K(1/16W)
R513
2R2(1/16W)
C516
100N
C515
100N
C514
100N
C513
100N
R518
10K(1/16W)
R502
2R2(1/16W)
L502
BEAD
R523
100(1/16W)
R524
100K(1/16W)
XTAL501
X24M
C502
22P
C501
22P
R501
2R2(1/16W)
C507
100N
R506
100(1/16W)
R505
100(1/16W)
R504
10K(1/16W)
R503
10K(1/16W)
R520
100(1/16W)
R517
100(1/16W)
R519
100(1/16W)
CN501
CN502
Gnd
Gnd
P 5V
I-2 CC
I-2 CD
/I-CRQ1
S-CLK
Data
W-CLK
EF
Gnd
P 5V
/Reset
/Busy
/CRQ02
S-CLK 2
Data 2
W CLK2
Gnd

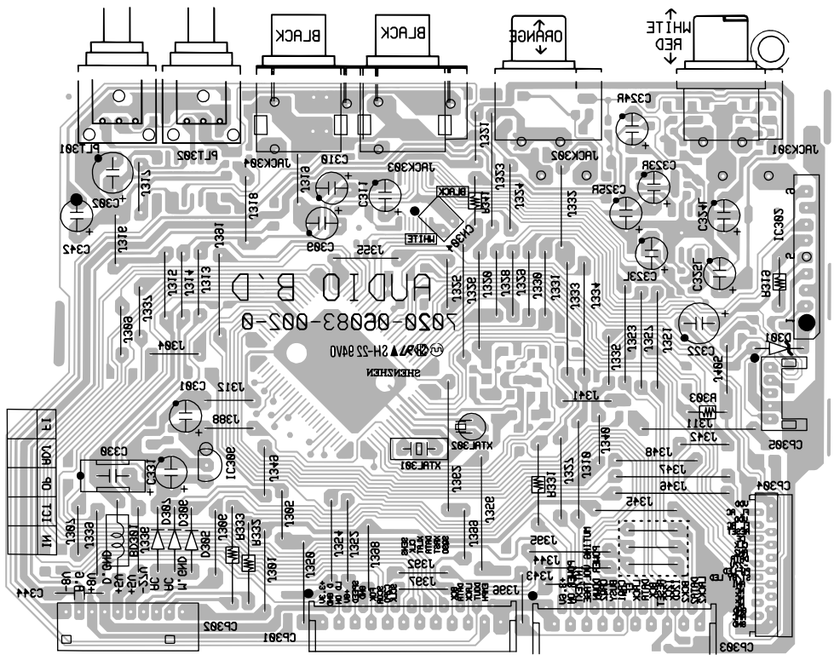
6. PARTS LOCATION

FRONT BOARD



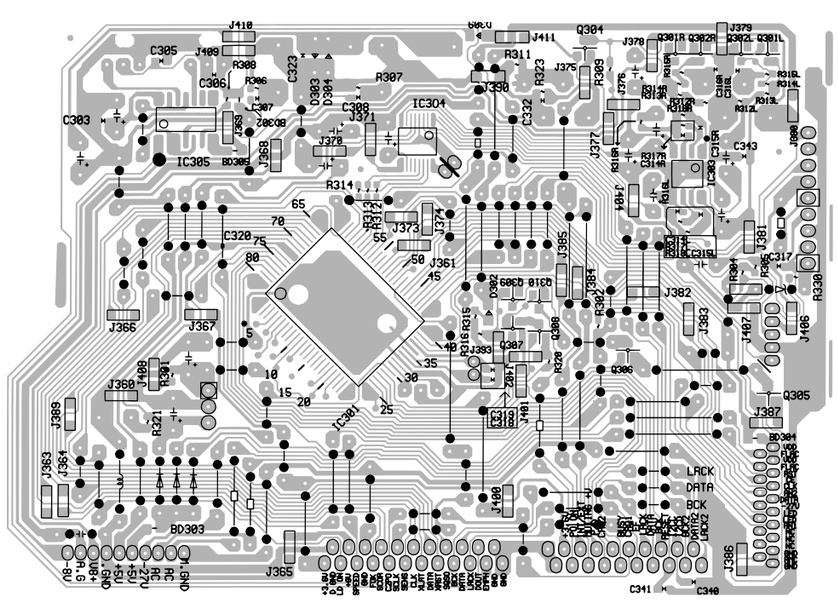


AUDIO BOARD IC309



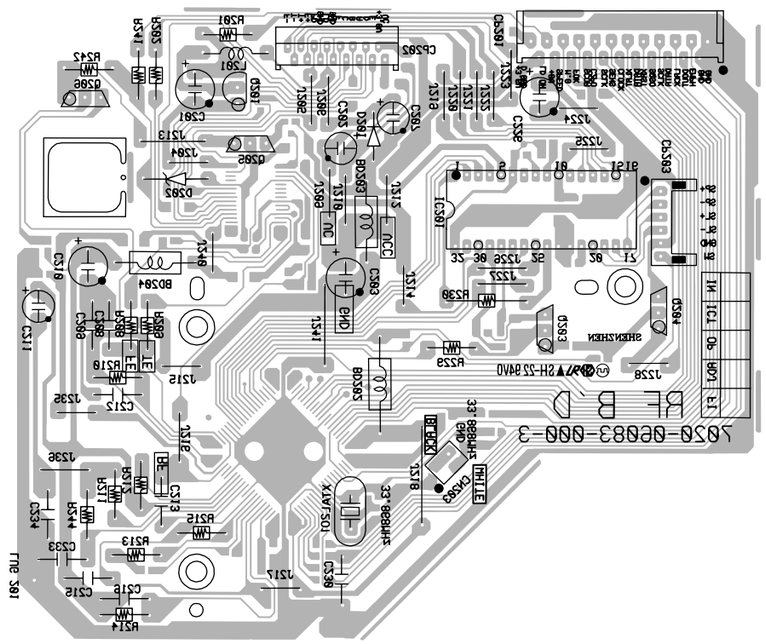
IC305 IC304 Q309 Q310 IC303 Q304 Q301R Q302R Q302L Q301L

IC301 Q307 Q308 Q306 Q305



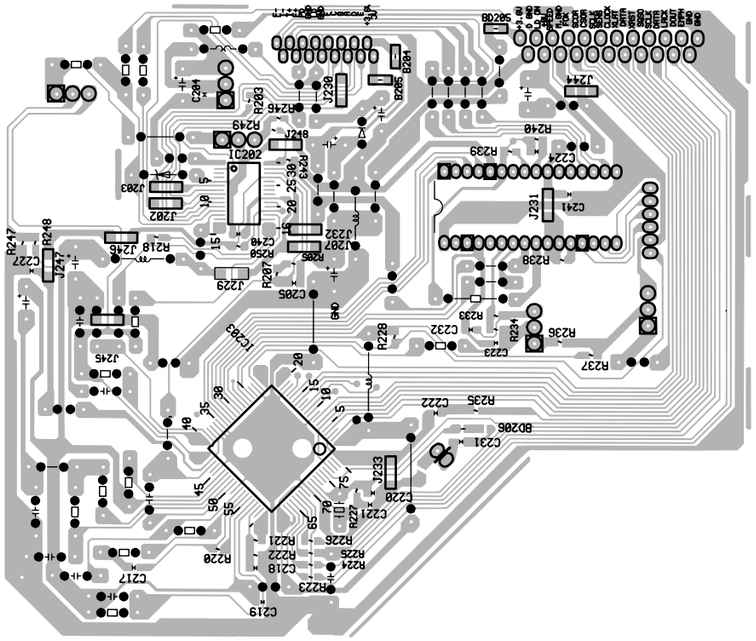
RF BOARD Q201 IC201

Q206 Q205 Q203 Q204



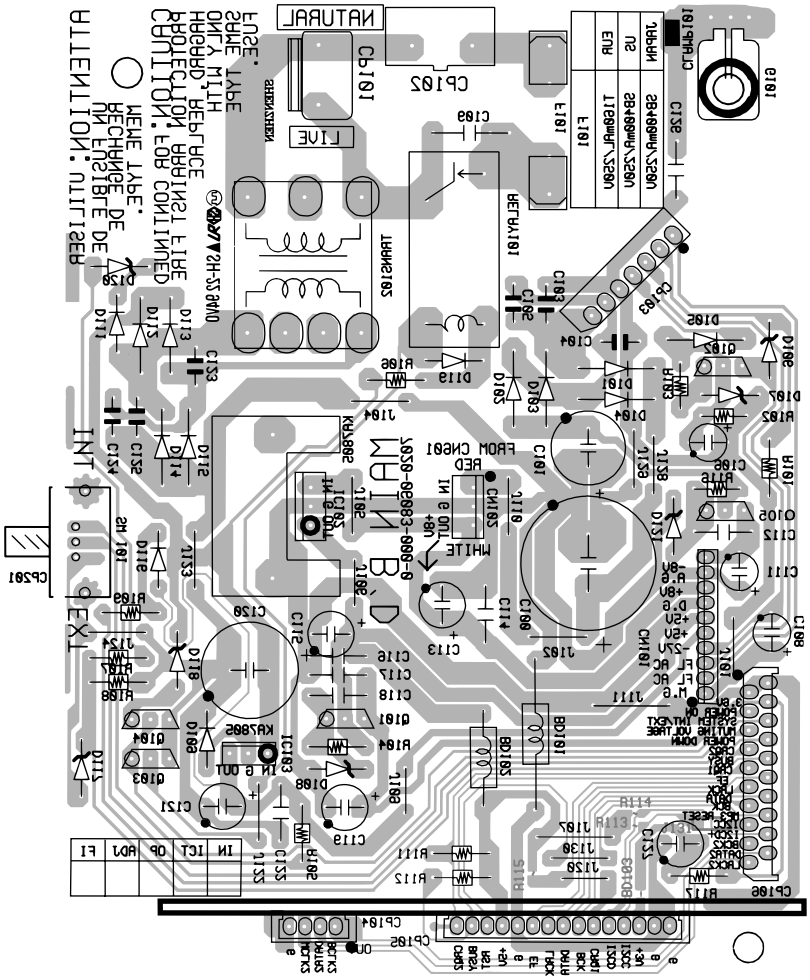
IC202

IC203



MAIN BOARD

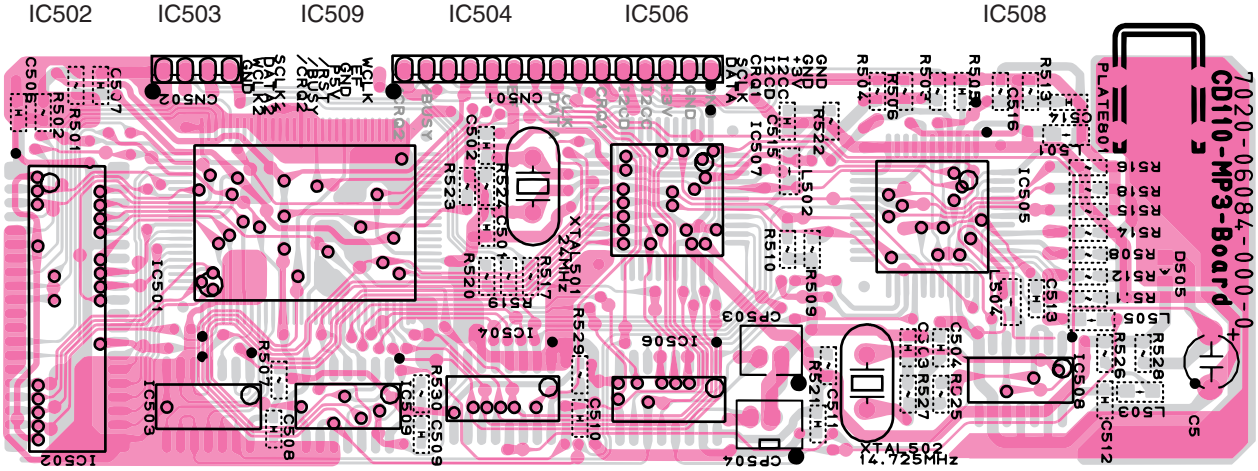
Q104 IC102 Q102
Q103 IC103 Q101 Q105



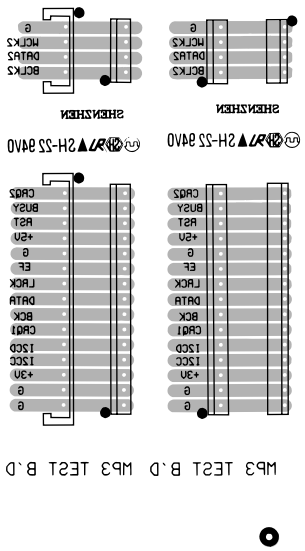
MP3 BOARD

IC501 IC507 IC505

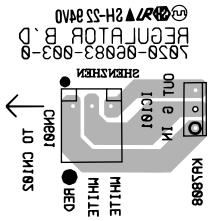
IC502 IC503 IC509 IC504 IC506 IC508



MP3 TEST BOARD



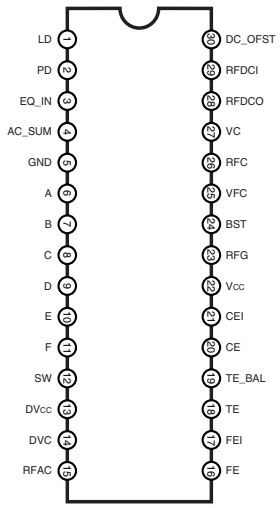
REGULATOR BOARD



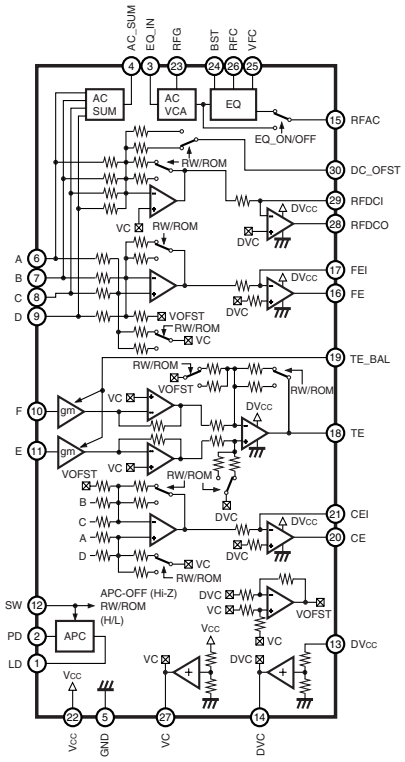
7. IC DATA

IC201:CXP2581

Pin Configuration



Block Diagram

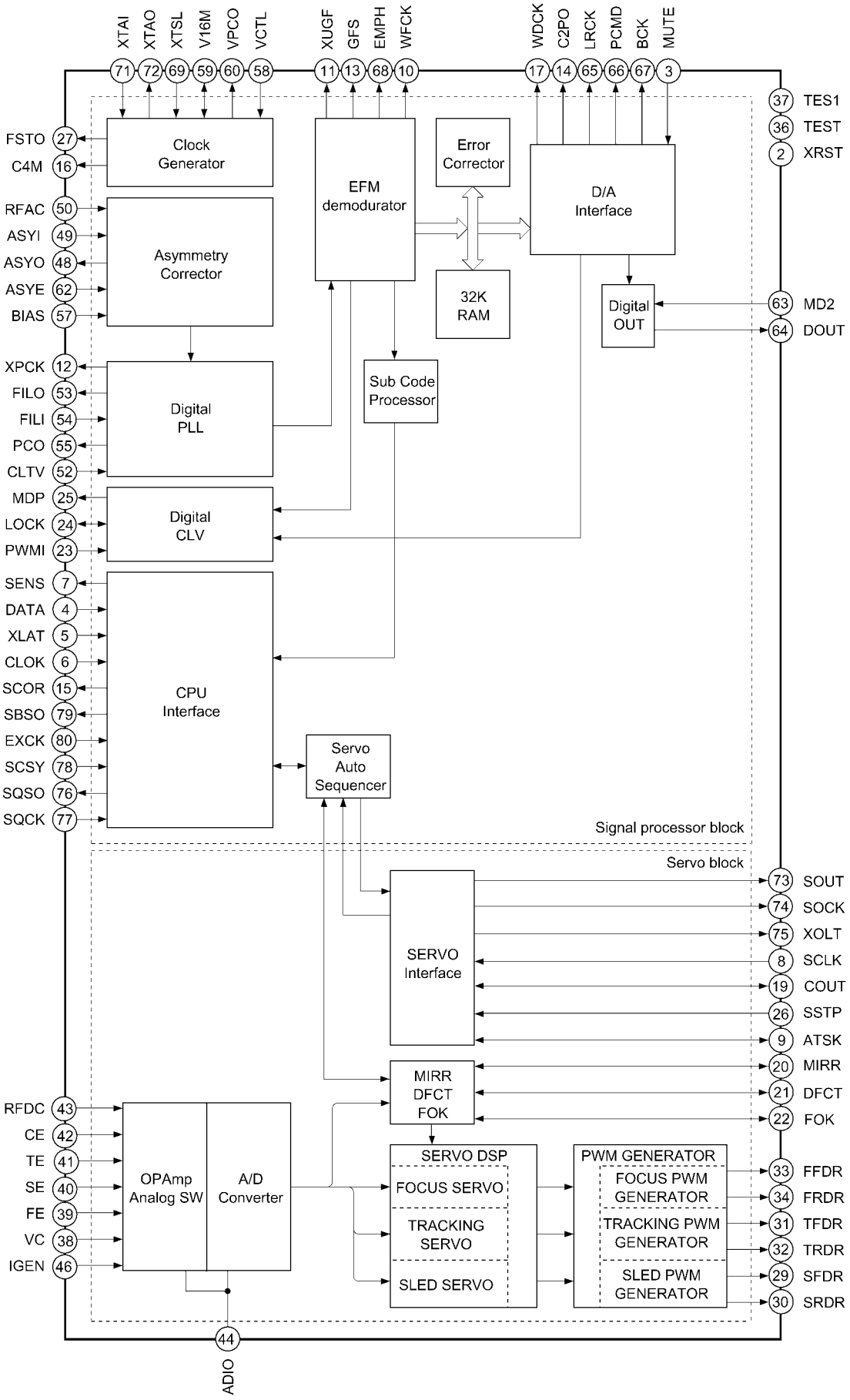


Pin Description

Pin No.	Symbol	I/O	Description
1	LD	O	APC amplifier output.
2	PD	I	APC amplifier input.
3	EQ_IN	I	RFAC system VCA block and EQ block input.
4	AC_SUM	O	RFAC system RF SUM output.
5	GND	I	GND.
6	A	I	A signal input.
7	B	I	B signal input.
8	C	I	C signal input.
9	D	I	D signal input.
10	E	I	E signal input.
11	F	I	F signal input.
12	SW	I	Mode switching signal input.
13	DVCC	I	DVCC.
14	DVC	O	DVC output.
15	RFAC	O	RFAC signal output.
16	FE	O	Focus error signal output.
17	FEI	I	FE amplifier virtual ground.
18	TE	O	Tracking error signal output.
19	TE_BAL	I	TE balance adjustment.
20	CE	O	Center error signal output.
21	CEI	I	CE amplifier virtual ground.
22	VCC	I	VCC.
23	RFG	I	RFAC system VCA block low frequency gain adjustment.
24	BST	I	EQ boost level adjustment.
25	VFC	I	EQ cut-off frequency adjustment.
26	RFC	I	EQ cut-off frequency adjustment.
27	VC	O	VC voltage output.
28	RFDCO	O	RFDC signal output.
29	RFDCI	I	RFDC amplifier virtual ground.
30	DC_OFST	I	RFDC signal output offset adjustment.

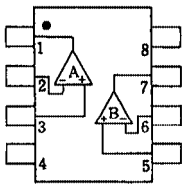
IC203:CXD3068Q

Block Diagram



IC303:NJM2068

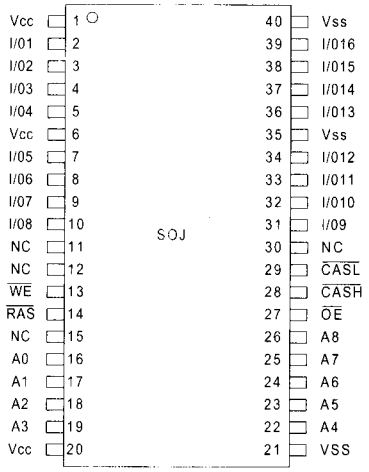
Pin Configuration



PIN FUNCITON
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V⁻
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. V⁺

IC502:T224162

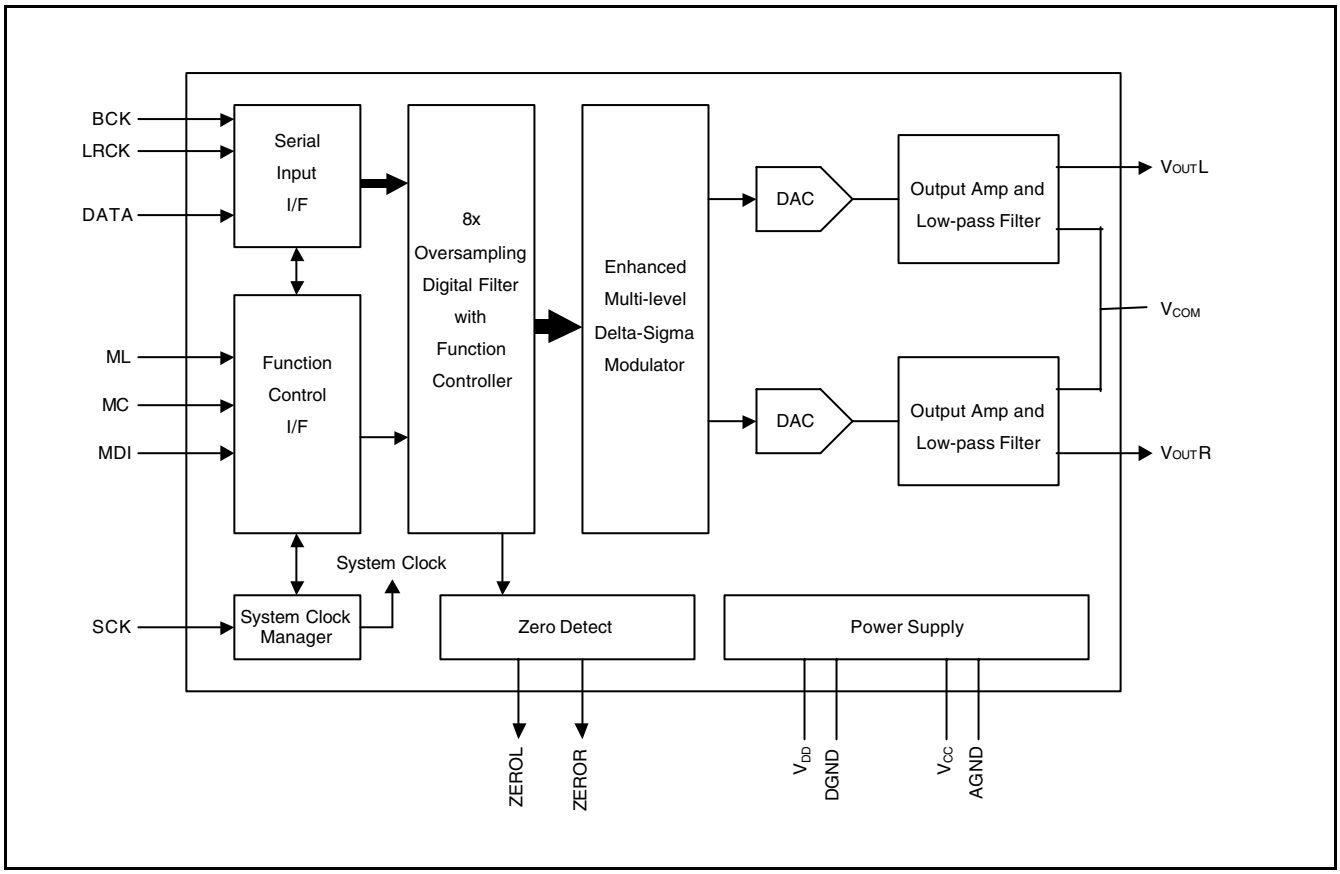
Pin Assignment



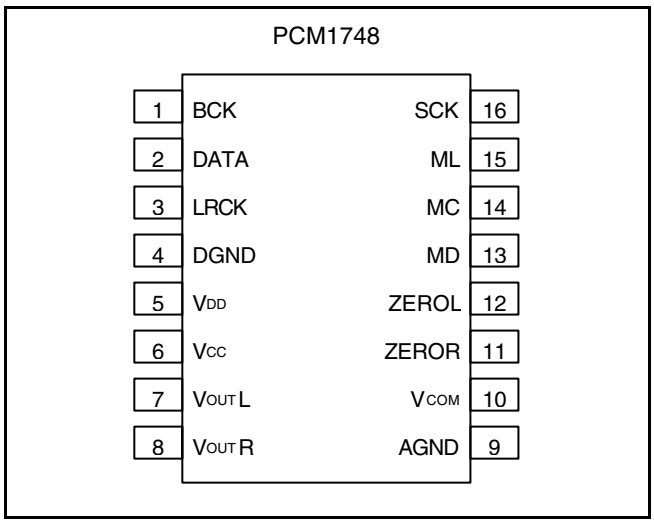
Pin Description

PIN NO.	SYM.	TYPE	DESCRIPTION
16~19,22~26	A0-A8	Input	Address Input
14	$\overline{RAS}$	Input	Row Address Strobe
28	$\overline{CASH}$	Input	Column Address Strobe /Upper Byte Control
29	$\overline{CASL}$	Input	Column Address Strobe /Lower Byte Control
13	$\overline{WE}$	Input	Write Enable
27	$\overline{OE}$	Input	Output Enable
2~5,6~10,31~34,36~39	I/O1 - I/O16	Input/ Output	Data Input/ Output
1,6,20	Vcc	Supply	Power, 5V
21,35,40	Vss	Ground	Ground
11,12,15,30	NC	-	No Connect

BLOCK DIAGRAM



PIN CONFIGURATION



PIN ASSIGNMENTS

PIN	NAME	TYPE	DESCRIPTIONS	
1	BCK	IN	Audio data bit clock input.	(1)
2	DATA	IN	Audio data digital input.	(1)
3	LRCK	IN	Audio data latch enable input.	(1)
4	DGND	-	Digital ground.	
5	V_{DD}	-	Digital power supply, + 3.3 V.	
6	V_{CC}	-	Analog power supply, + 5 V.	
7	$V_{OUT}L$	OUT	Analog output for L-channel.	
8	$V_{OUT}R$	OUT	Analog output for R-channel.	
9	AGND	-	Analog ground.	
10	V_{COM}	-	Common voltage decoupling.	(1)
11	ZEROR	OUT	Zero flag output for R-channel.	
12	ZEROL	OUT	Zero flag output for L-channel.	
13	MD	IN	Mode control data Input.	(2)
14	MC	IN	Mode control clock input.	(2)
15	ML	IN	Mode control latch input.	(2)
16	SCK	IN	System clock input.	

Note:
(1) Schmitt trigger input, 5 V tolerant.
(2) Schmitt trigger input with internal pull-down, 5 V tolerant.

IC503/509:74HC08

PIN DESCRIPTION

PIN NO.	SYMBOL	NAME AND FUNCTION
1, 4, 9, 12	1A to 4A	data inputs
2, 5, 10, 13	1B to 4B	data inputs
3, 6, 8, 11	1Y to 4Y	data outputs
7	GND	ground (0 V)
14	V_{CC}	positive supply voltage

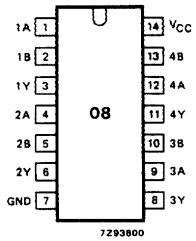


Fig.1 Pin configuration.

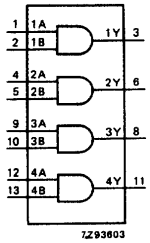


Fig.2 Logic symbol.

FUNCTION TABLE

INPUTS		OUTPUT
nA	nB	nY
L	L	L
L	H	L
H	L	L
H	H	H

Note

1. H = HIGH voltage level
   L = LOW voltage level

IC504:74HC166

PIN DESCRIPTION

PIN NO.	SYMBOL	NAME AND FUNCTION
1	D_s	serial data input
2, 3, 4, 5, 10, 11, 12, 14	D_0 to D_7	parallel data inputs
6	$\overline{CE}$	clock enable input (active LOW)
7	CP	clock input (LOW-to-HIGH edge-triggered)
8	GND	ground (0 V)
9	$\overline{MR}$	asynchronous master reset (active LOW)
13	Q_7	serial output from the last stage
15	$\overline{PE}$	parallel enable input (active LOW)
16	V_{CC}	positive supply voltage

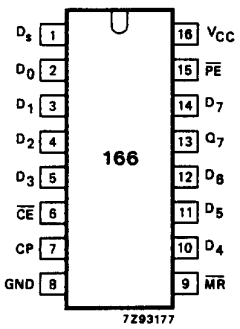


Fig.1 Pin configuration.

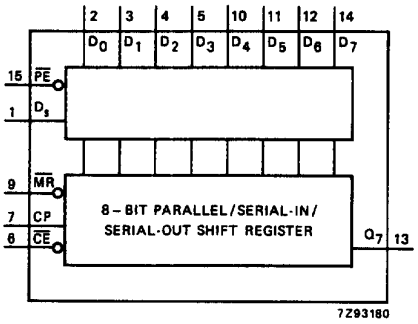
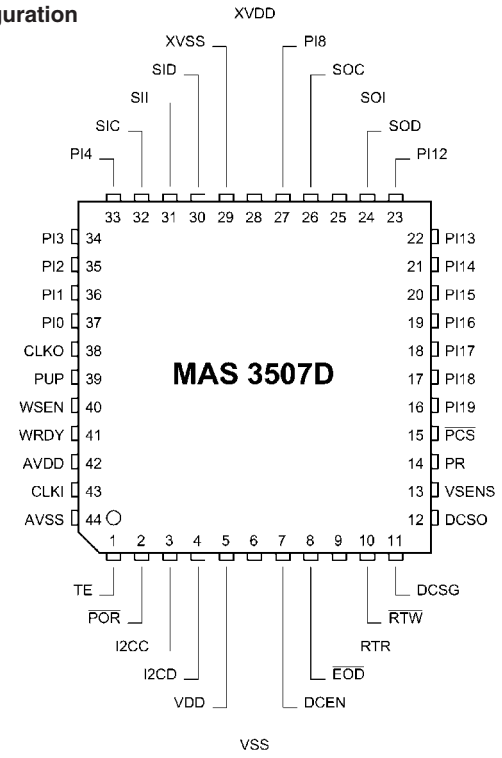


Fig.4 Functional diagram.

Pin Configuration



Pin No. PMQFP 44-pin	Pin No. PLCC 44-pin	Pin No. PBGA 49-ball	Pin Name Test Alias in ()	Type	Connection (If not used)	Short Description
1	6	C3	TE	IN	VSS	Test Enable
2	5	C2	$\overline{POR}$	IN	VDD	Reset, Active Low
3	4	B1	I2CC	IN/OUT	X	I^2C Clock Line
4	3	D2	I2CD	IN/OUT	X	I^2C Data Line
5	2	C1	VDD	SUPPLY	X	Positive Supply for Digital Parts
6	1	D1	VSS	SUPPLY	X	Ground Supply for Digital Parts
7	44	E2	DCEN	IN	VSS	Enable DC/DC Converter
8	43	E1	$\overline{EOD}$	OUT	LV	PIO End of DMA, Active Low
9	42	F2	$\overline{RTR}$	OUT	LV	PIO Ready to Read, Active Low
10	41	F1	$\overline{RTW}$	OUT	LV	PIO Ready to Write, Active Low
11	40	G1	DCSG	SUPPLY	VSS	DC Converter Transistor Ground
12	39	E3	DCSO	OUT	VSS	DC Converter Transistor Open Drai
13	38	F3	VSENS	IN	VDD	DC Converter Voltage Sense
14	37	G2	PR	IN	X	PIO-DMA Request or Read/$\overline{Write}$

Pin No. PMQFP 44-pin	Pin No. PLCC 44-pin	Pin No. PBGA 49-ball	Pin Name Test Alias in ()	Type	Connection (If not used)	Short Description
15	36	F4	$\overline{PCS}$	IN	X	PIO Chip Select, Active Low
16	35	G3	PI19	IN/OUT	LV	PIO Data [19] 1. Demand Pin in SDI mode 2. data bit [7], MSB (PIO-DMA input mode)
17	34	E4	PI18	IN/OUT	LV	PIO Data [18] 1. MPEG header bit 11 – MPEG ID (SDI mode) 2. data bit [6] (PIO-DMA input mode)
18	33	G4	PI17	IN/OUT	LV	PIO Data [17] 1. MPEG header bit 12 – MPEG ID (SDI mode) 2. data bit [5] (PIO-DMA input mode)
19	32	F5	PI16	IN/OUT	LV	PIO Data [16] 1. SIC*, alternative input for SIC (SDI mode) 2. data bit [4] (PIO-DMA input mode)
20	31	G5	PI15	IN/OUT	LV	PIO Data [15] 1. SII*, alternative input for SII (SDI mode) 2. data bit [3] (PIO-DMA input mode)
21	30	F6	PI14	IN/OUT	LV	PIO Data [14] 1. SID*, alternative input for SID (SDI mode) 2. data bit [2] (PIO-DMA input mode)
22	29	G6	PI13	IN/OUT	LV	PIO Data [13] 1. MPEG header bit 13 – Layer ID (SDI mode) 2. data bit [1] (PIO-DMA input mode)
23	28	E5	PI12	IN/OUT	LV	PIO Data [12] 1. MPEG header bit 14 – Layer ID (SDI mode) 2. data bit [0] (PIO-DMA input mode)
24	27	E6	SOD (PI11)	OUT	LV	Serial Output Data
25	26	F7	SOI (PI10)	OUT	LV	Serial Output Frame Identification
26	25	D6	SOC (PI9)	OUT	LV	Serial Output Clock
27	24	E7	PI8	IN	X	Start-up[1]: Clock output scaler on / off
				OUT		Operation[2]: MPEG CRC error
28	23	D7	XVDD	SUPPLY	X	Positive Supply of Output Buffers
29	22	C6	XVSS	SUPPLY	X	Ground of Output Buffers
30	21	C7	SID (PI7)	IN	X	Serial Input Data
31	20	B6	SII (PI6)	IN	VSS	Serial Input Frame Identification

Pin No. PMQFP 44-pin	Pin No. PLCC 44-pin	Pin No. PBGA 49-ball	Pin Name Test Alias in ()	Type	Connection (If not used)	Short Description
32	19	B7	SIC (PI5)	IN	X	Serial Input Clock
33	18	A7	PI4	IN	X	Start-up[1]: Select SDI / PIO-DMA input mode
				OUT		Operation[2]: MPEG-Frame Sync
34	17	B5	PI3	IN	X	Start-up[1]: Enable Layer 3 / Disable Layer 3 decoding
				OUT		Operation[2]: MPEG header bit 20 (Sampling frequency)
35	16	A6	PI2	IN	X	Start-up[1]: Enable Layer 2 / Disable Layer 2 decoding
				OUT		Operation[2]: MPEG header bit 21 (Sampling frequency)
36	15	B4	PI1	IN	X	Start-up[1]: SDO: Select 32-bit mode / 16-bit I^2S mode
				OUT		Operation[2]: MPEG header bit 30 (Emphasis)
37	14	A5	PI0	IN	X	Start-up[1]: Select Multimedia mode / Broadcast mode
				OUT		Operation[2]: MPEG header bit 31 (Emphasis)
38	13	C4	CLKO	OUT	LV	Clock Output for the D/A converter
39	12	A4	PUP	OUT	LV	Power Up, i.e. status of voltage sup vision
40	11	B3	WSEN	IN	X	Enable DSP and Start DC/DC Con-verter
41	10	A3	WRDY	OUT	LV	If WSEN = 0: valid clock input at CL If WSEN = 1: clock synthesizer PLL locked
42	9	B2	AVDD	SUPPLY	VDD	Supply for analog circuits
43	8	A2	CLKI	IN	X	Clock input
44	7	A1	AVSS	SUPPLY	VSS	Ground supply for analog circuits

[1] Start-up configuration see Section 2.8.
[2] Not available in PIO-DMA mode, see Section 2.8.1.

PIN DESCRIPTION

PIN NO.	SYMBOL	NAME AND FUNCTION
1	S	common data select input
2, 5, 11, 14	$1I_0$ to $4I_0$	data inputs from source 0
3, 6, 10, 13	$1I_1$ to $4I_1$	data inputs from source 1
4, 7, 9, 12	1Y to 4Y	multiplexer outputs
8	GND	ground (0 V)
15	$\overline{E}$	enable input (active LOW)
16	V_{CC}	positive supply voltage

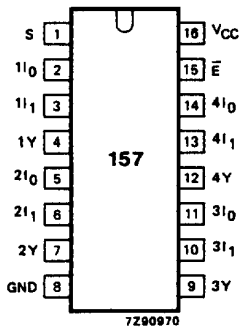


Fig.1 Pin configuration.

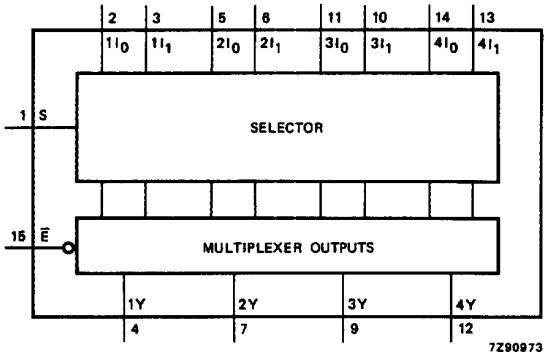


Fig.4 Functional diagram.

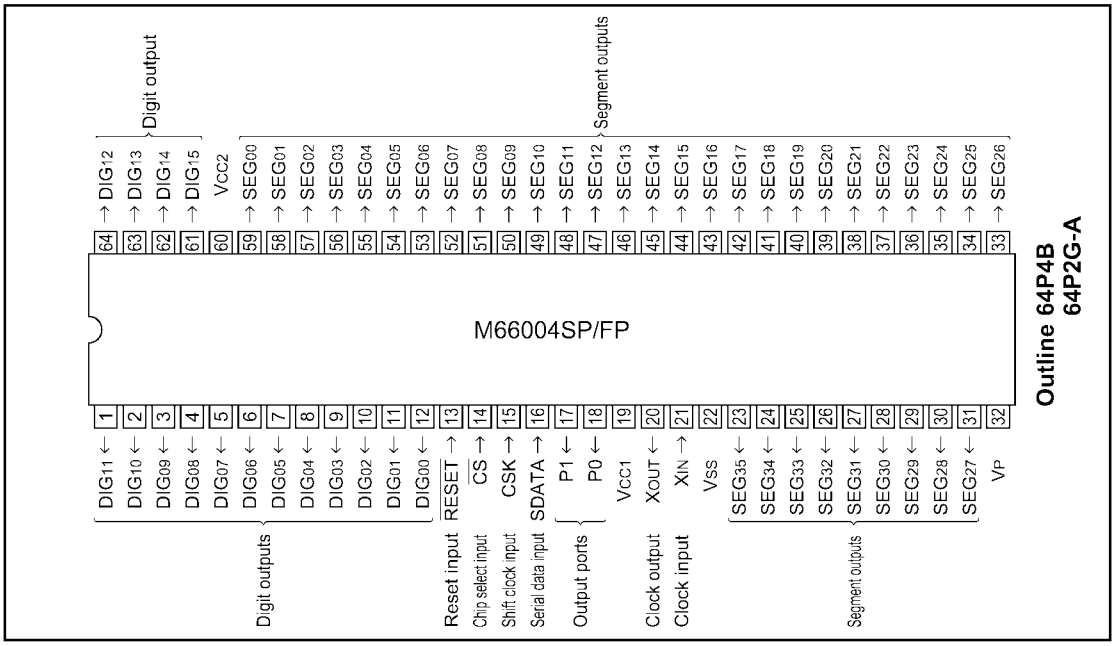
FUNCTION TABLE

INPUTS				OUTPUT
$\overline{E}$	S	nI_0	nI_1	nY
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

Notes

1. H = HIGH voltage level
   L = LOW voltage level
   X = don't care

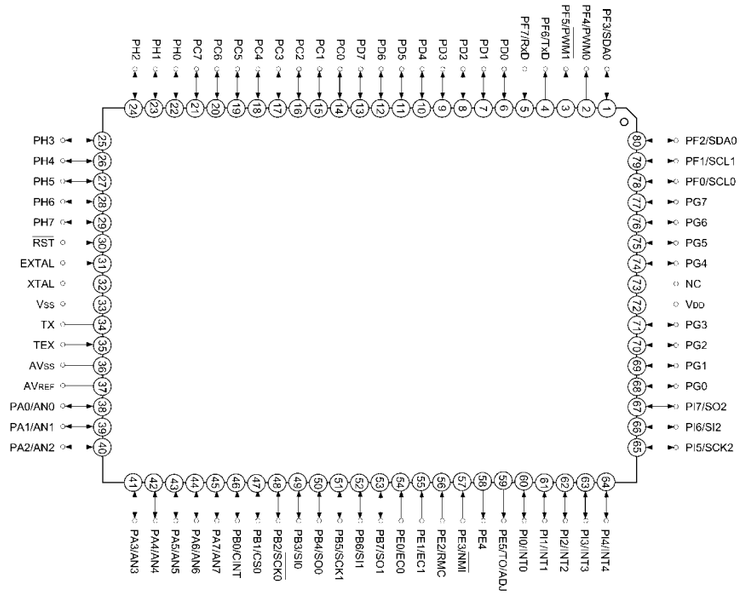
IC801:M66004F



PIN DESCRIPTIONS

Symbol	Pin name	Function
$\overline{\text{RESET}}$	Reset input	This pin is used to initialize the internal state of the M66004.
CS	Chip select input	In "L" state, communication with the MCU is possible. In "H" state, any instruction from the MCU is neglected.
SCK	Shift clock input	At the rising edge from "L" to "H", input data is shifted.
SDATA	Serial data input	Character code or command data to display is input from MSB.
X_{IN}, X_{OUT}	Clock input Clock output	This pin is used to connect a resistor and a capacitor externally to set oscillation frequency. (maximum oscillation frequency fosc(max)=1MHz) An external clock can be also connected. In this case, an external clock is connected to pin X_{IN}, and pin X_{OUT} is set to be in open state.
DIG_{00}~ DIG_{15}	Digit output	These pins are used to connect to digit pins of VFD. Pins from DIG_{00} to DIG_{15} correspond to digits of VFD from the first digit to the 16th digit.
SEG_{00}~ SEG_{35}	Segment output	These pins are used to connect to segment pins of VFD. Pins from SEG_{00} to SEG_{35} correspond to segment pins of VFD as shown in the table below.
P0, P1		Output port (static operation)
V_{CC1}		Positive power supply for internal logic
V_{CC2}		Positive power supply for high-pressure-resistant output port
V_{SS}		GND
V_P		Negative power supply for VFD drive

Pin Assignment

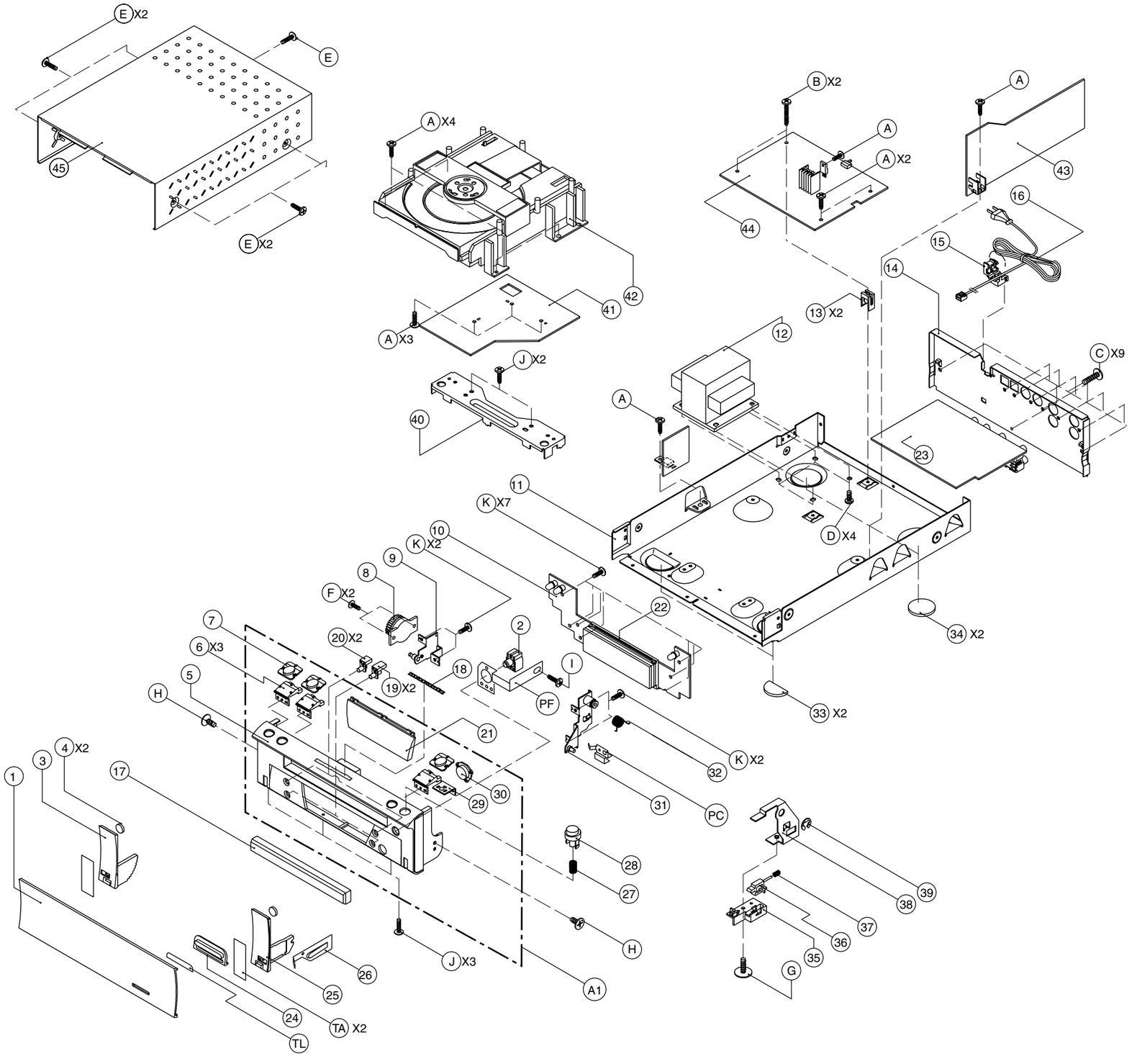


Note) NC (Pin 73) must be connected VDD.

PIN NO	PIN NAME	Operation	Description	ASSIGN
1-25	N.C			
26	RC-5 ON/OFF	Output for RC-5 on/off		O
27	RC-5 IN	Input for RC-5		I
28	RC-5 OUT	Output for RC-5		O
29	RC-5 int /ext	Input for RC-5 int/ext		I
30	RST	Input for RESET	Active "LOW"	I
31	EXTAL	Input for 10MHz crystal oscillator.		I
32	XTAL	Output for 10MHz crystal oscillator.		O
33	VSS	Ground		I
34	TX	Input for 38.768KHz sub crystal oscillator		I
35	TEX	Output for 38.768KHz sub crystal oscillator		O
36	AVSS	Ground		
37	AVREF	VDD +5V		
38	MUTE	Output for MUTE	Active "LOW"	O
39	KEY IN2	Data input key scan	Check Port for AD Key Input	I
40	KEY IN1	Data input key scan	Check Port for AD Key Input	I
41	OPEN SW	Input for detecting "TRAY OPEN SW" condition		I
42	CLOSE SW	Input for detecting "TRAY CLOSE SW" condition		I
43	OPEN	Output for cd tray open	Active "HIGH"	O
44	CLOSE	Output for cd tray close	Active "HIGH"	O

PIN NO	PIN NAME	Operation	Description	ASSIGN
45	POWER ON	Output for relay on	Active "HIGH"	O
46	FL_RESET	Output for RESET of M66005 FLT DRIVE IC		O
47	FL_CE	Output for CE 66005 FLT DRIVE IC		O
48	CD DSP SCLK	Input for SCLK of CXD3068Q CD DSP		I
49	NC			
50	FL_DATA	Output for DATA of M66005 FLT DRIVE IC		O
51	ST/BY LED	Output to drive SYBY LED(RED)		O
52	POWER ON LED	Output to drive POWER ON LED(GREEN)		O
53	FL_ CLK	Output for CLK of M66005 FLT DRIVE IC		O
54,55	NC			
56	RMC	Input for remocon data		I
57	EMPHASIS IN	Input for CXD3068Q emphasis check	Active "HIGH"	I
58	MC	Output for D/A mode control clock		O
59	MD	Output for D/A mode control data		O
60	ML	Output for D/A mode control latch		O
61	BUSY	Input for mp3 busy data	"LOW" when BUSY	I
62	SCOR	Input for SCOR of CXD3068Q CD DSP		I
63	CRQ2	Input for mp3 CRQ2 data (MP3 Unit request I2C BUS)		I
64	POWER DOWN	Input for power down		I
65	DSP_CLK	Output for CLOCK of CXD3068 CD DSP		O
66	DSP_SUBQ	Input for SUB-Q of CXD3068Q CD DSP		I
67	DSP_DATA	Output for DATA of CXD3068 CD DSP		O
68	DSP_FOK	Input for FOK of CXD3068Q CD DSP		I
69	DSP_XLT	Output for LATCH of CXD3068 CD DSP		I
70	DSP_LD ON	Output for LD on	CD CDR:"LOW" , CD-RW:"HIGH"	O
71	DSP_SENS	Input for SENS of CXD3068Q CD DSP		O
72	VDD	VDD +5V		
73	VDD	VDD +5V		
74	DSP XRST	Output for RESET of CXD3068 CD DSP		O
75	SPEED	Output for cd speed	Normal:"HIGH" , Double:"LOW"	O
76	CRQ1	Output for mp3 CRQ1 data (MAIN CPU Request I2C data)		O
77	MP3 RESET	Output for mp3 RESET		O
78	I2C CLOCK	Clock for i2c bus		I/O
79	NC			
80	I2C DATA	Data for i2c bus		I/O

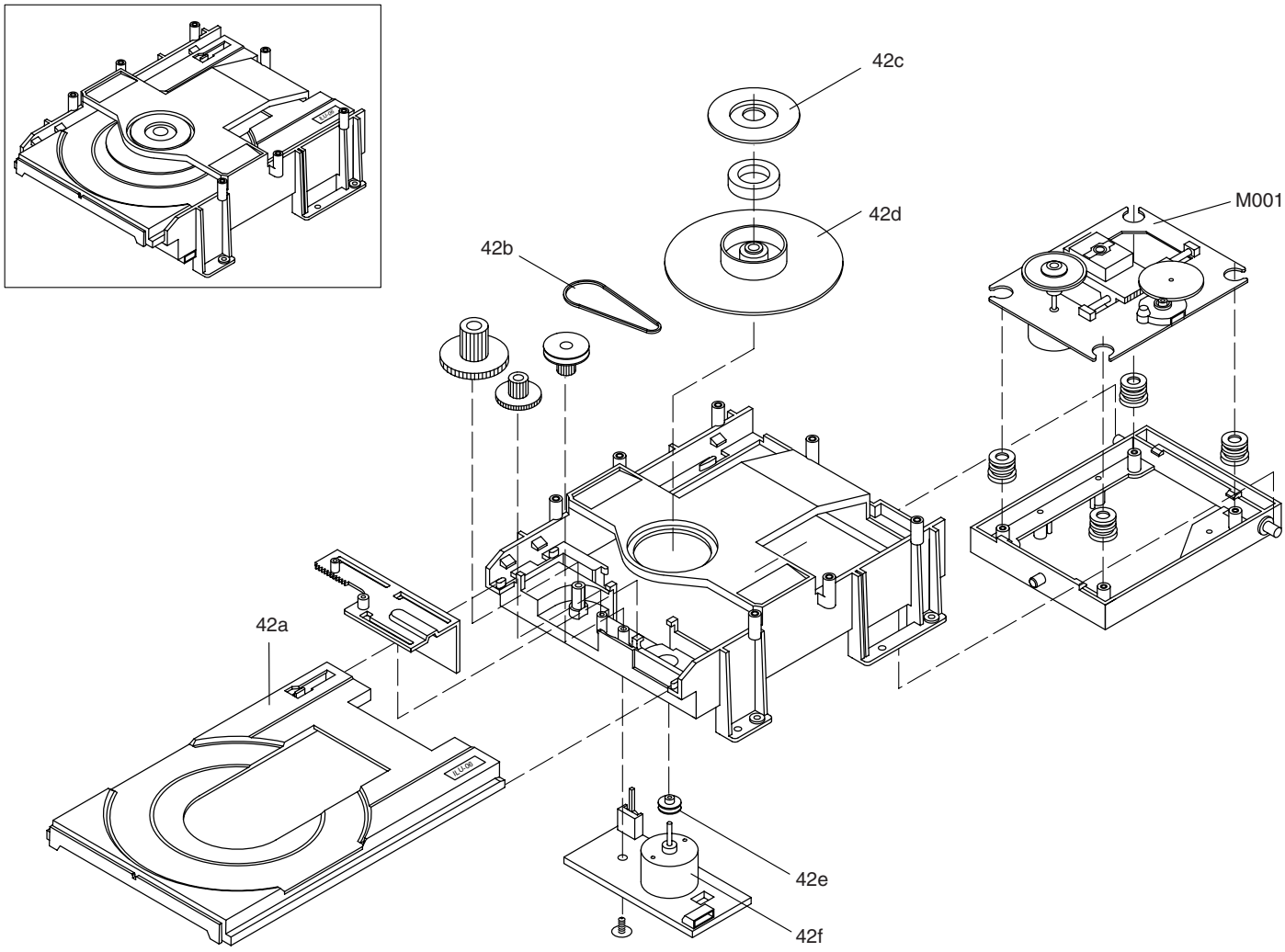
8. EXPLODED VIEW AND PARTS LIST



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
1		9965 000 11102	PANEL DOOR	324W162010
2		9965 000 11103	BUTTON EJECT	325W270040
3		9965 000 10697	ARM DOOR L	323W002010
4		9965 000 10698	CUSHION DOOR	323W259010
A1		9965 000 11104	FRONT PANEL SUB ASSY	324W248500
5		nsp	PANEL, BUTTON POWER B	324W248010
6		nsp	BUTTON POWER B	323W270030
7		nsp	BUTTON POWER A	323W270010
8		9965 000 10701	DAMPER GEAR DP802	323W130010
9		9965 000 10702	BRACKET DOOR C	323W160060
⚠ 10		nsp	P.C.B SUB ASSY, FRONT	nsp
11		nsp	CHASSIS MAIN	nsp
⚠ 12	N	9965 000 11105	TRANSF. MAINS FOR N	*TS001280R
⚠ 12	U	nsp	TRANSF. MAINS FOR U	*TS001290R
⚠ 12	F	nsp	TRANSF. MAINS FOR F	*TS001300R
13		9965 000 11106	SUPPORTER	324W101010
14	N	nsp	REAR PANEL	324W250020
14	U	nsp	REAR PANEL	324W250040
14	F	nsp	REAR PANEL	324W250060
15	N, U	9965 000 11058	CORD HOLDER DACH-1	323W259030
15	F	nsp	CORD HOLDER DACH-2	323W259020
16	N	9965 000 11107	MAINS CORD ASSY FOR N	*YC000610R
16	U	nsp	MAINS CORD ASSY FOR U	*YC000600R
16	F	nsp	MAINS CORD ASSY FOR F	*YC000590R
17		9965 000 11108	COVER TRAY CD	324W053010
18		9965 000 10708	BADGE MARANTZ	323W251010
19		9965 000 11109	BUTTON MENU	325W270010
20		9965 000 11110	BUTTON REC	325W270020
21		nsp	WINDOW DISPLAY	325W158010
22		nsp	SUPPORTER FLT	nsp
⚠ 23		nsp	P.C.B ASSY, AUDIO	nsp
24		9965 000 10709	WINDOW REMOTE	323W158030
25		9965 000 10713	ARM DOOR R	323W002020
26		9965 000 11111	PLATE EARTH A	323W123010
27		9965 000 10714	SPRING DOOR C	323W115010
28		9965 000 10715	KNOB OPEN	323W154020
29		nsp	SUPPORTER EJECT	323W101010
30		nsp	WINDOW REMOCON A	323W158020
31		9965 000 10716	BRACKET DOOR A	323W160010
32		9965 000 10717	SPRING DOOR A	323W115020
33		9965 000 10718	CUSHION FOOT FRONT	323W057010
34		9965 000 10719	CUSHION FOOT BACK	323W057020
35		9965 000 10720	HOLDER HINGE B	323W271020
36		9965 000 10721	HOLDER HINGE A	323W271010
37		9965 000 10703	SPRING DOOR B	323W115030
38		9965 000 10722	BRACKET DOOR B	323W160020
39		9965 000 10723	E-RING	323W353100
40		nsp	BRACKET MECHA CD	nsp
⚠ 41		nsp	P.C.B ASSY, P.C.B RF	nsp
42		9965 000 11112	LOADER ASSY WITHOUT CD MECHA / ILU-06B	324W163010
⚠ 43		nsp	P.C.B ASSY, MP3	nsp
⚠ 44	N	nsp	P.C.B ASSY, MAIN FOR N	nsp
⚠ 44	U	nsp	P.C.B ASSY, MAIN FOR U	nsp
⚠ 44	F	nsp	P.C.B ASSY, MAIN FOR F	nsp
45		9965 000 11113	CABINET, TOP COVER	324W257010
PC		nsp	PLATE EARTH "C"	nsp
PF		nsp	PALTE EARTH "F"	nsp
TA		nsp	TAPE ARM	nsp
TL		nsp	TAPE LENS	nsp
TP		nsp	TAPE PROTECTOR	nsp
A		nsp	SCREW,TAP TITE, +2S 3x8 B-TYPE ZNY/BH	nsp
B		nsp	SCREW,TAP TITE, +2S 3x17 B-TYPE ZNY/BH	nsp

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
C		nsp	SCREW,TAP TITE, AVR3300(E3) +2S 3x10 B-TYPE(DOT) BK/BH	nsp
D		nsp	SCREW,TAP TITE ASSY, +3S 4x8 P+S-WASHER ZNY/BH	nsp
F		nsp	SCREW,TAP TITE, 3x8 B-TYPE CR/BH	nsp
F		nsp	SCREW,TAPPING, +2S 2x6 BK/PH	nsp
G		nsp	SCREW, +2S 3x8 PI9.5 B-TYPE ZNY	nsp
H		nsp	SCREW,TAP TITE, +2S 3x5 B-TYPE BK/FH	nsp
I		nsp	SCREW,TAP TITE, +3S 3x5 ZNY/BH	nsp
J		nsp	SCREW,TAP TITE, +2S 3x6 B-TYPE ZNY/BH	nsp
K		nsp	SCREW,TAP TITE, +#2PS 3x8Y	nsp
			PACKING	
001T	N	9965 000 11100	USER GUIDE CD110/N1S	324W851310
001T	U	nsp	USER GUIDE CD110/U1S	324W851250
001T	F	nsp	USER GUIDE CD110/F1S	324W851110
001Z		9965 000 11101	REMOTE CONTROLLER RC110CD	ZK324W0010
			NOT STANDARD SPARE PARTS	
-	N	nsp	CARD Important	nsp
-	U	nsp	CARD Warranty(USA Ver.)	nsp
-	F	nsp	CARD Post(JAPAN Ver.)	nsp
-	U	nsp	CARD Warranty(CANADA Ver.)	nsp
-	F	nsp	CARD Warranty(JAPAN Ver.)	nsp
001S		nsp	BOX GIFT	324W801010
002S		nsp	CUSHION SNOW	323W809010

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
M001		9965 000 11137	CD PICK UP MECHA. UNIT	324W304500
42a		9965 000 11112	LOADER TRAY	324W163010
42b		9965 000 11138	LOADING BELT	324W264010
42c		9965 000 11139	PLATE CLAMPER	324W005010
42d		9965 000 11140	CLAMPER	324W005020
42e		9965 000 11141	PULLEY	324W262010
42f		9965 000 11142	MOTOR LOADER	*MM001160R

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

9. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R✻✻✻: 1) GD05×××140, Carbon film fixed resistor, ±5% 1/4W
R✻✻✻: 2) GD05×××160, Carbon film fixed resistor, ±5% 1/6W
① ——— Resistance value

Examples ;
① Resistance value

0.1 Ω 001	10 Ω 100	1 kΩ 102	100 kΩ 104
0.5 Ω 005	18 Ω 180	2.7 kΩ 272	680 kΩ 684
1 Ω 010	100 Ω 101	10 kΩ 103	1 MΩ 105
6.8 Ω 068	390 Ω 391	22 kΩ 223	4.7 MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C✻✻✻: CERAMIC CAP.
3) DD1××××370, Ceramic capacitor
②③ Disc type
Temp.coeff.P350 ～N1000, 50V
③ ——— Capacity value
② ——— Tolerance

Examples ;
② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5% 5
✻ Tolerance of COMMON PARTS handled here are as follows :
0.5 pF～ 5 pF .... ±0.25 pF
6 pF～ 10 pF .... ±0.5 pF
12 pF～ 560 pF .... ±5%
③ Capacity value

0.5 pF 005	3 pF 030	100 pF 101
1 pF 010	10 pF 100	220 pF 221
1.5 pF 015	47 pF 470	560 pF 561

C✻✻ : CERAMIC CAP.
4) DK16××× 300, High dielectric constant ceramic capacitor
④ Disc type
Temp.chara. 2B4, 50V
④ ——— Capacity value

Examples ;
④ Capacity value

100 pF 101	1000 pF 102	10000 pF 103
470 pF 471	2200 pF 222	

C✻✻ : 5) ELECTROLY CAP. (⫢), 6) FILM CAP. (⫧)
5) EA⑤××××⑥× 10, Electrolytic capacitor
One-way lead type, Tolerance ±20%
⑥ ——— Working voltage
⑤ ——— Capacity value

Examples ;
⑤ Capacity value

0.1 µF 104	4.7 µF 475	100 µF 107
0.33 µF 334	10 µF 106	330 µF 337
1 µF 105	22 µF 226	1100 µF 118
		2200 µF 228

⑥ Working voltage

6.3V 006	25V 025
10V 010	35V 035
16V 016	50V 050

6) DF15××× 350 → Plastic film capacitor
DF15××× 310 One-way type, Mylar ±5% 50V
DF16××× 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ ——— Capacity value

Examples ;
⑦ Capacity value

0.001 µF (1000 pF) 102	0.1 µF 104
0.0018 µF 182	0.56 µF 564
0.01 µF 103	1 µF 105
0.015 µF 153	

NOTE : 1) The above CODES (R✻✻✻ , R✻✻✻ , C✻✻✻ , C✻✻✻ and C ✻✻✻) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts (**RI05**, **DD4**, **DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05×××140	RF25S××××ΩJ	(±5% 1/4W)
NH05×××120	RF50S××××ΩJ	(±5% 1/2W)
NH85×××110	RF73B2A××××ΩJ	(±5% 1/10W)
NH95×××140	RF73B2E××××ΩJ	(±5% 1/4W)

✻ Resistance value — Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05×××140	ERD-2FCJ×××	(±5% 1/4W)
RF05×××140		
NF02×××140	ERD-2FCG×××	(±2% 1/4W)
RF02×××140		

✻Resistance value — ✻Resistance value

Examples ;
✻ Resistance value

0.1 Ω 001	10 Ω 100	1 kΩ 102	100 kΩ 104
0.5 Ω 005	18 Ω 180	2.7 kΩ 272	680 kΩ 684
1 Ω 010	100 Ω 101	10 kΩ 103	1 MΩ 105
6.8 Ω 068	390 Ω 391	22 kΩ 223	4.7 MΩ 475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
µ-PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X'TAL	: CRYSTAL

NOTE ON FUSE :

Regarding to all parts of parts code **FS20**xxx**2**xx, replace only with Wickmann-Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意：

⚠がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

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POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			MAIN CIRCUIT BOARD	
			MAIN -CAPACITORS	
C100		nsp	ELECT,3300µF-M/25V 16x25L.	nsp
C101		nsp	ELECT,470µF-M/25V 10x12.5	nsp
C103		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C104		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C105		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C106		nsp	ELECT,22µF-M/50V 5x11-5RE	nsp
C108		nsp	ELECT,10µF-M/50V 5x11-5RE	nsp
⚠ C109		9965 000 11120	CER. AC(SAFETY), DE7150-487F 472MVAI	DK17472840
C111		nsp	ELECT,22µF-M/50V 5x11-5RE	nsp
C112		nsp	CER.,0.001µF-K/50V-52RE	nsp
C113		nsp	ELECT,100µF-M/16V 6.3x11	nsp
C114		nsp	CER.,0.1µF-Z/50V-52RE	nsp
C115		nsp	ELECT,100µF-M/16V 6.3x11	nsp
C116		nsp	CER.,0.1µF-Z/50V-52RE	nsp
C117		nsp	CER.,0.1µF-Z/50V-52RE	nsp
C118		nsp	CER.,0.001µF-K/50V-52RE	nsp
C119		nsp	ELECT,100µF-M/10V 5x11-5RE	nsp
C120		nsp	ELECT,1000µF-M/35V 12.5x25L	nsp
C121		nsp	ELECT,100µF-M/16V 6.3x11	nsp
C122		nsp	CER.,0.1µF-Z/50V-52RE	nsp
C123		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C124		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C125		nsp	CER.,0.047µF-Z/50V-5RE PI10	nsp
C126		nsp	CER.,0.1µF-Z/50V-52RE	nsp
C127		nsp	ELECT,100µF-M/10V 5x11-5RE	nsp
			MAIN-RESISTORS	
R101		nsp	10K-J 1/5W-52RE-AX	nsp
R102		nsp	47K-J 1/5W-52RE-AX	nsp
R103		nsp	4.7K-J 1/5W-52RE-AX	nsp
R104		nsp	100-J 1/5W-52RE	nsp
R105		nsp	100K-J 1/5W-52RE-AX	nsp
R106		nsp	33-J 1/5W-52RE-AX	nsp
R107		nsp	10K-J 1/5W-52RE-AX	nsp
R108		nsp	10K-J 1/5W-52RE-AX	nsp
R109		nsp	4.7K-J 1/5W-52RE-AX	nsp
R111 ∫		nsp	10K-J 1/5W-52RE-AX	nsp
R115		nsp		
R116		nsp	330-J 1/5W-52RE-AX	nsp
R117		nsp	22-J 1/5W-52RE-AX	nsp
			MAIN-SEMICONDUCTORS	
D101 ∫		9965 000 10728	DIODE,IN4007 52 1000V 1A	*HD201570R
D105				
D109		4822 130 32778	DIODE,1SS133T-72	HD20015210
D111		4822 130 32778	DIODE,1SS133T-72	HD20015210
D112 ∫		9965 000 10728	DIODE,IN4007 52 1000V 1A	*HD201570R
D115				
D116		4822 130 32778	DIODE,1SS133T-72	HD20015210
D119		4822 130 32778	DIODE,1SS133T-72	HD20015210
D106		4822 130 33948	D,ZENER,MTZJ5.6B-0.5W/5MA	HD30561000
D107		4822 130 10624	D,ZENER,MTZJ27B-0.5W/5MA	*HD301580R
D108		4822 130 31554	D,ZENER,MTZJ4.3B-0.5W/5MA	HD30431000
D117		4822 130 33948	D,ZENER,MTZJ5.6B-0.5W/5MA	HD30561000
D118		9965 000 10586	D,ZENER,MTZJ20B-0.5W/5MA	*HD301950R
D120		9965 000 01374	D,ZENER,MTZJ2.7B-0.5W/5MA	HD30271000
D121		4822 130 30862	D,ZENER,MTZJ9.1B-0.5W/5MA	*HD301970R
⚠ IC101		9965 000 11121	IC,KA7808 LINEAR-REGULATOR	*HC300380R
⚠ IC102		4822 209 31631	IC,KIA7805PI 20W-TO220IS LINEAR-REGULATOR	HC3890509F
⚠ IC103		4822 209 31631	IC,KIA7805PI 20W-TO220IS LINEAR-REGULATOR	HC3890509F
Q101		9965 000 11122	TRS.2SC,KTC3205Y1W/TO92L	*BA001260R
Q102		9965 000 11123	TRS.2SA,KTA1273Y1W/TO92L	*BA001250R
Q103		4822 130 50437	TRS.,DTC143ES 0.3W/TO92M	*BA001300R
Q104		9965 000 10444	TRS.,KRC107M 0.4W/TO92M	*BA001070R
Q105		9965 000 11123	TRS.2SA,KTA1273Y 1W/TO92L	*BA001250R
			MAIN-MISCELLANEOUS	
⚠ CP101		nsp	CN.WAFER 7.92MM, YW396-32V 2P	nsp
⚠ CP102		nsp	CN.WAFER 3.96MM, 35328-0210	nsp
⚠ CP103		nsp	CN.WAFER 2.5MM,5267-07A7P	nsp
CP104		nsp	CN.WAFER 2.0MM, 35336-0410 4P	nsp
CP105		nsp	CN.WAFER 2.0MM, 35336-1510 15P	nsp
CP106		nsp	CN.FPC 1.25MM, 52045-2045 20P ST	nsp
⚠ F101	N	4822 070 31601	FUSE (5.2x20), 250V-T160MA-S/V/B/R(YARN)	*FS000450R
⚠ F101	U, F	nsp	FUSE (5.2x20), 250V-S315MA-U/C(RESI)	*FS000800R
FCLIP101		nsp	HOLDER,FUSE CLIP	nsp
FCLIP102		nsp	HOLDER,FUSE CLIP	nsp
G101		nsp	TERMINAL, ALL PBST/GND PLATE	nsp
J131		nsp	CHIP,0-J 1/8W-3216	nsp
SW101		9965 000 10732	SW,SLIDE,SSAF112NA011	*SS000700R
⚠ RELAY 101		9965 000 10737	RELAY,G5PA-1-8 12V 5A	*LY000260R
⚠ TRANS 102	N	9965 000 11027	SUB TRANSF. FOR N	*TS001540R
⚠ TRANS 102	U	nsp	SUB TRANSF. FOR U	*TS001360R
⚠ TRANS 102	F	nsp	SUB TRANSF. FOR F	*TS001370R
			RF CIRCUIT BOARD	
			RF -CAPACITORS	
C201		nsp	ELECT,100µF-M/10V 6.3x5-5RE	nsp
C202		nsp	ELECT,47µF-M/16V 6.3x5-5RE	nsp
C203		nsp	ELECT,100µF-M/10V 6.3x5-5RE	nsp
C204		nsp	CER.CHIP,1000pF-K/50V	nsp
C205		nsp	CER.CHIP,1000pF-K/50V	nsp
C206		nsp	CER.,15pF-J/50V-52RE	nsp
C207		nsp	ELECT,1µF-M/50V 3x5-5RE	nsp
C208		nsp	CER.,220pF-K/50V-52RE	nsp
C209		nsp	CER.,220pF-K/50V-52RE	nsp
C210		nsp	ELECT,100µF-M/10V 6.3x5-5RE	nsp
C211		nsp	ELECT,0.47µF-M/50V 3x5-5RE	nsp
C212		nsp	CER.,0.022µF-Z/25V-52RE	nsp
C213		nsp	CER.,0.01µF-M/16V-52RE	nsp
C214		nsp	CER.,100pF-K/50V-52RE	nsp
C215		nsp	CER.,0.0015µF-M/16V-52RE	nsp
C216		nsp	CER.,0.01µF-M/16V-52RE	nsp
C217		nsp	CER.CHIP,0.047µF-K/16V	nsp
C218		nsp	CER.CHIP,0.1µF-K/50V	nsp
C219		nsp	CER.CHIP,0.1µF-K/50V	nsp
C220		nsp	CER.CHIP,27pF-J/50V	nsp
C221		nsp	CER.CHIP,27pF-J/50V	nsp
C222		nsp	CER.CHIP,0.01µF-K/50V	nsp
C223		nsp	CER.CHIP,0.068µF-Z/50V	nsp
C224		nsp	CER.CHIP,100pF-J/50V	nsp
C225		nsp	CER.CHIP,68pF-J/50V	nsp
C226		nsp	ELECT,220µF-M/10V 8x5	nsp
C227		nsp	CER.CHIP,0.1µF-K/50V	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
C230		nsp	CER.,47pF-J/50V-52RE	nsp
C231		nsp	CER.CHIP,1000pF-K/50V	nsp
			RF -RESISTORS	
R201		nsp	10-J 1/5W-52RE-AX	nsp
R202		nsp	15K-J 1/5W-52RE-AX	nsp
R203		nsp	15K-J 1/5W-52RE-AX	nsp
R204		nsp	1-J 1/5W-52RE-AX	nsp
R205		nsp	CHIP,2.2K-J 1/16W	nsp
R206		nsp	CHIP,1.2K-J 1/16W	nsp
R207		nsp	CHIP,1.8K-J 1/16W	nsp
R208		nsp	15K-J 1/5W-52RE-AX	nsp
R209		nsp	15K-J 1/5W-52RE-AX	nsp
R210		nsp	100K-J 1/5W-52RE-AX	nsp
R211		nsp	100K-J 1/5W-52RE-AX	nsp
R212		nsp	33K-J 1/5W-52RE-AX	nsp
R213		nsp	3.3K-J 1/5W-52RE-AX	nsp
R214		nsp	1M-J 1/5W-52RE-AX	nsp
R215		nsp	10K-J 1/5W-52RE-AX	nsp
R217		nsp	CHIP,10K-J 1/16W	nsp
R218		nsp	CHIP,150K-J 1/16W	nsp
R219		nsp	CHIP,100K-J 1/16W	nsp
R220		nsp	CHIP,3.3K-J 1/16W	nsp
R221		nsp	CHIP,470K-J 1/16W	nsp
R222		nsp	CHIP,1M-J 1/16W	nsp
R223		nsp	CHIP,390-J 1/16W	nsp
R224		nsp	CHIP,220-J 1/16W	nsp
R225		nsp	CHIP,220-J 1/16W	nsp
R226		nsp	CHIP,220-J 1/16W	nsp
R227		nsp	CHIP,1M-J 1/16W	nsp
R228		nsp	CHIP,10K-J 1/16W	nsp
R229		nsp	1.5K-J 1/5W-52RE-AX	nsp
R230		nsp	470K-J 1/5W-52RE-AX	nsp
R233		nsp	CHIP,1.2K-J 1/16W	nsp
R234		nsp	CHIP,4.7K-J 1/16W	nsp
R235		nsp	CHIP,1K-J 1/16W	nsp
R236		nsp	CHIP,220K-J 1/16W	nsp
R237		nsp	CHIP,4.7K-J 1/16W	nsp
R238		nsp	CHIP,1K-J 1/16W	nsp
R239		nsp	CHIP,220K-J 1/16W	nsp
R240		nsp	CHIP,470K-J 1/16W	nsp
R241		nsp	470-J 1/5W-52RE-AX	nsp
R242		nsp	CHIP,100K-J 1/16W	nsp
R243		nsp	CHIP,15K-J 1/16W	nsp
R245		nsp	CHIP,18K-J 1/16W	nsp
R246		nsp	CHIP,15K-J 1/16W	nsp
			RF -SEMICONDUCTORS	
D201		4822 130 32778	DIODE,1SS133T-72	HD20015210
IC201		9965 000 11133	IC,LINEAR-DRIVER, BA5979S DIP32	*HC107400R
IC202		9965 000 11135	IC,OPTICAL-RF AMP, CXA2581N-24P	*HC107340R
IC203		9965 000 11136	IC,OPTICAL-RF SERVO, CXD3068Q QFP80	*HC107350R
Q201		9965 000 11134	TRS.2SA,KTA1270Y0.5W/TO92	*BA001240R
Q202		9965 000 10444	TRS.,KRC107M 0.4W/TO92M	*BA001070R
Q203		4822 130 61723	TRS.,DTC323TS 0.3W/TO92M	*BA001310R
Q204		9965 000 10444	TRS.,KRC107M 0.4W/TO92M	*BA001070R
			RF -MISCELLANEOUS	
CP201		nsp	CN.FPC 1.25MM, 52044-2345 23P ANGLE	nsp
CP202		nsp	CN.FPC 1.0MM, 52807-1610 16P ANGLE	nsp
CP203		nsp	CN.WAFER 2.0MM, GIL-S-6P-S2L2-EF	nsp

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
J207		nsp	CHIP,0-J 1/8W-3216	nsp
J230		nsp	CHIP,0-J 1/8W-3216	nsp
J231		nsp	CHIP,0-J 1/8W-3216	nsp
J233		nsp	CHIP,0-J 1/8W-3216	nsp
J244		nsp	CHIP,0-J 1/8W-3216	nsp
L201		nsp	COIL,FILTER-INDUCTOR, 10UH-Q40/24M-R2.5-52RE02TB	nsp
XTAL201		9965 000 11132	CRYSTAL, 33.8688MHZ HC49/S CL=20pF	*JX000840R
			AUDIO CIRCUIT BOARD	
			AUDIO -CAPACITORS	
C301		nsp	ELECT,1µF-M/50V 3*5-5RE	nsp
C302		nsp	ELECT,100µF-M/16V 6.3*11	nsp
C303		nsp	CER.CHIP,0.1µF-K/50V	nsp
C305		nsp	CER.CHIP,0.01µF-K/50V	nsp
C306		nsp	CER.CHIP,0.01µF-K/50V	nsp
C307		nsp	CER.CHIP,0.1µF-K/50V	nsp
C308		nsp	CER.CHIP,0.1µF-K/50V	nsp
C309		nsp	ELECT,10µF-M/16V 3*5-5RE	nsp
C310		nsp	ELECT,22µF-M/16V 5*5-5RE	nsp
C311		nsp	ELECT,10µF-M/16V 3*5-5RE	nsp
C314L		nsp	CER.CHIP,2700pF-K/50V	nsp
C314R		nsp	CER.CHIP,2700pF-K/50V	nsp
C315L		nsp	CER.CHIP,270pF-J/50V	nsp
C315R		nsp	CER.CHIP,270pF-J/50V	nsp
C316L		nsp	CER.CHIP,100pF-J/50V	nsp
C316R		nsp	CER.CHIP,100pF-J/50V	nsp
C317		nsp	CER.CHIP,0.1µF-K/50V	nsp
C318		nsp	CER.CHIP,27pF-J/50V	nsp
C319		nsp	CER.CHIP,27pF-J/50V	nsp
C320		nsp	CER.CHIP,0.1µF-K/50V	nsp
C322		nsp	ELECT,100µF-M/16V 6.3*11	nsp
C323		nsp	CER.CHIP,0.1µF-K/50V	nsp
C323L		nsp	ELECT,10µF-M/16V 5*11	nsp
C323R		nsp	ELECT,10µF-M/16V 5*11	nsp
C324L		nsp	ELECT,10µF-M/16V 5*11	nsp
C324R		nsp	ELECT,10µF-M/16V 5*11	nsp
C325L		nsp	ELECT,22µF-M/16V 5*5-5RE	nsp
C325R		nsp	ELECT,22µF-M/16V 5*5-5RE	nsp
C330		9965 000 11128	DOUBLE LAYER(70), H0.047F-70UA/5.5V-5RE	*EX000090R
C331		nsp	ELECT,47µF-M/16V 6.3*5-5RE	nsp
C332		nsp	CER.CHIP,0.1µF-K/50V	nsp
			AUDIO -RESISTORS	
R301		nsp	CHIP,10K-J 1/16W	nsp
R302		nsp	CHIP,10K-J 1/16W	nsp
R303		nsp	10K-J 1/5W-52RE-AX	nsp
R304		nsp	CHIP,10K-J 1/16W	nsp
R305		nsp	CHIP,10K-J 1/16W	nsp
R306		nsp	CHIP,75-J 1/16W	nsp
R307		nsp	CHIP,75-J 1/16W	nsp
R308		nsp	CHIP,47-J 1/16W	nsp
R309		nsp	CHIP,220K-J 1/16W	nsp
R311		nsp	CHIP,10K-J 1/16W	nsp
R312		nsp	CHIP,1K-J 1/16W	nsp
R312L		nsp	CHIP,100K-J 1/16W	nsp
R312R		nsp	CHIP,100K-J 1/16W	nsp
R313		nsp	CHIP,1K-J 1/16W	nsp
R313L		nsp	CHIP,330-J 1/16W	nsp
R313R		nsp	CHIP,330-J 1/16W	nsp
R314		nsp	CHIP,1K-J 1/16W	nsp
R314L		nsp	CHIP,330-J 1/16W	nsp
R314R		nsp	CHIP,330-J 1/16W	nsp
R315		nsp	CHIP,47-J 1/16W	nsp
R315L		nsp	CHIP,100-J 1/16W	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R315R		nsp	CHIP,100-J 1/16W	nsp
R316		nsp	CHIP,2.2K-J 1/16W	nsp
R316L		nsp	CHIP,8.2K-J 1/16W	nsp
R316R		nsp	CHIP,8.2K-J 1/16W	nsp
R317L		nsp	CHIP,1K-J 1/16W	nsp
R317R		nsp	CHIP,1K-J 1/16W	nsp
R318L		nsp	CHIP,15K-J 1/16W	nsp
R318R		nsp	CHIP,15K-J 1/16W	nsp
R319		nsp	2.2-J 1/5W-52RE-AX	nsp
R320		nsp	CHIP,2.2K-J 1/16W	nsp
R323		nsp	CHIP,47-J 1/16W	nsp
			AUDIO -SEMICONDUCTORS	
D301		4822 130 83142	D,ZENER,MTZJ6.2B-0.5W/5MA	HD30621000
D302		9965 000 11119	DIODE CHIP,1SS355USM	*HD201580R
D303		9965 000 11119	DIODE CHIP,1SS355USM	*HD201580R
D304		9965 000 11119	DIODE CHIP,1SS355USM	*HD201580R
D305		4822 130 32778	DIODE,1SS133T-72	HD20015210
D306		4822 130 32778	DIODE,1SS133T-72	HD20015210
D307		4822 130 32778	DIODE,1SS133T-72	HD20015210
IC302		9965 000 03719	IC,MOTOR DRIVER, BA6956AN SIP9	*HC107410R
IC303		5322 209 13406	IC,LINEAR OP, NJM2068MD SOP8	*HC107380R
IC304		9965 000 11130	IC-D/A CONVER, PCM1748E SSOP16	*HC107360R
IC305		9965 000 10992	IC,MC74HCU04AD SOP14	*HC700180R
IC306		9965 000 11129	IC,LINEAR-RESET, KIA7032P 3.2V/TO92	*HC107390R
Q301L		4822 130 63187	TRS.2SC,DTC323TK	*BA001270R
Q301R		4822 130 63187	TRS.2SC,DTC323TK	*BA001270R
Q302L		4822 130 63187	TRS.2SC,DTC323TK	*BA001270R
Q302R		4822 130 63187	TRS.2SC,DTC323TK	*BA001270R
Q303		9965 000 10763	TRS.2SC,KRC107S	*BA001160R
Q304		9965 000 10746	CHIP TRS.2SA,KRA107S	*BA001170R
Q305		4822 130 90326	CHIP TRS.2SA,DTA114TK	*BA001280R
Q306		9965 000 10745	CHIP TRS.2SA,KRA102S	*BA001230R
Q307		9965 000 10745	CHIP TRS.2SA,KRA102S	*BA001230R
Q308		9965 000 10753	CHIP.TRS. 2SC,KRC102S	*BA001220R
Q309		9965 000 11131	CHIP.TRS. 2SC,KRC104S	*BA001290R
Q310		9965 000 10745	CHIP TRS.2SA,KRA102S	*BA001230R
			AUDIO -MISCELLANEOUS	
CP301		nsp	CN.FPC 1.25MM, 52044-2345 23P ANGLE	nsp
CP302		nsp	CN.WAFER 2.0MM, 53015-1010 10P ANGLE	nsp
CP303		nsp	CN.FPC 1.25MM, 52044-2045 20P ANGLE	nsp
CP304		nsp	CN.FPC 1.0MM, 52807-1910 19P ANGLE	nsp
CP305		nsp	CN.WAFER 2.0MM,GIL-S-5P-S2L2-EF	nsp
J360 ∫ J404		nsp	CHIP,0-J 1/8W-3216	nsp
JACK301		9965 000 11125	TER,RCA 2PIN, JK020130DN(GND PLATE&PIN)	*YJ002480R
JACK302		9965 000 11126	TER,RCA 2PIN, JK020130LN(GND PLATE&PIN)	*YJ002490R
JACK303		9965 000 11127	TER,RCA 1PIN, JE010003PN(GND) BLACK	*YT002670R
JACK304		9965 000 11127	TER,RCA 1PIN, JE010003PN(GND) BLACK	*YT002670R
PLT301		4822 130 10845	MODULE,GP1F32T / OPTICAL TX	YJ15000090
PLT302		4822 130 10845	MODULE,GP1F32T / OPTICAL TX	YJ15000090

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
XTAL302		9965 000 11124	CRYSTAL, MX-38T(32.768KHZ) NDK	*JX000830R
XTAL301		9965 000 10739	RESONATOR,CERAMIC, CST10.0MTW-TF01	*FQ000350R
			MP3 CIRCUIT BOARD	
			MP3 -CAPACITORS	
C501		nsp	CER.CHIP,22pF-J/50V	nsp
C502		nsp	CER.CHIP,22pF-J/50V	nsp
C503		nsp	CER.CHIP,10pF-D/50V	nsp
C504		nsp	CER.CHIP,10pF-D/50V	nsp
C505		nsp	ELECT,4.7µF-M/16V 3x5	nsp
C506 ∫ C516		nsp	CER.CHIP,0.1µF-K/50V	nsp
C520		nsp	CER.CHIP,1000pF-K/50V	nsp
			MP3 -RESISTORS	
R501		nsp	CHIP,2.2-J 1/16W	nsp
R502		nsp	CHIP,2.2-J 1/16W	nsp
R503		nsp	CHIP,10K-J 1/16W	nsp
R504		nsp	CHIP,10K-J 1/16W	nsp
R505		nsp	CHIP,100-J 1/16W	nsp
R506		nsp	CHIP,100-J 1/16W	nsp
R507		nsp	CHIP,2.2-J 1/16W	nsp
R508 ∫ R512		nsp	CHIP,10K-J 1/16W	nsp
R513		nsp	CHIP,2.2-J 1/16W	nsp
R514		nsp	CHIP,10K-J 1/16W	nsp
R515		nsp	CHIP,10K-J 1/16W	nsp
R516		nsp	CHIP,10K-J 1/16W	nsp
R517		nsp	CHIP,100-J 1/16W	nsp
R518		nsp	CHIP,10K-J 1/16W	nsp
R519		nsp	CHIP,100-J 1/16W	nsp
R520		nsp	CHIP,100-J 1/16W	nsp
R521		nsp	CHIP,2.2-J 1/16W	nsp
R522		nsp	CHIP,2.2-J 1/16W	nsp
R523		nsp	CHIP,100-J 1/16W	nsp
R524		nsp	CHIP,100K-J 1/16W	nsp
R525		nsp	CHIP,1K-J 1/16W	nsp
R526		nsp	CHIP,2.2-J 1/16W	nsp
R527		nsp	CHIP,100K-J 1/16W	nsp
R528		nsp	CHIP,10K-J 1/16W	nsp
R529		nsp	CHIP,2.2-J 1/16W	nsp
R530		nsp	CHIP,2.2-J 1/16W	nsp
			MP3 -SEMICONDUCTORS	
D505		9965 000 11119	DIODE CHIP,1SS355USM	*HD201580R
IC502		9965 000 11116	IC,MEMORY-RAM, T224162B-35J SOJ40	*HC106780R
IC503		4822 209 17184	IC,74HCT08 SOP14	*HC700390R
IC504		9965 000 11117	IC,ENCODER, 74HC166D SOP16	*HC700410R
IC505		9965 000 06200	IC,DECODER, MAS3507D-QG-F10 PQFPF44	*HC107370R
IC506		9965 000 11118	IC,PC74HC157D SOP16	*HC700400R
IC508		9965 000 10992	IC,MC74HCU04AD SOP14	*HC700180R
IC509		4822 209 17184	IC,74HCT08 SOP14	*HC700390R
			MP3 -MISCELLANEOUS	
CN501		nsp	CN.WAFER 2.0MM, 35237-1510 15P	nsp
CN502		nsp	CN.WAFER 2.0MM, 35237-0410 4P	nsp
CP503		nsp	CN.WAFER 2.0MM, GIL-S-2P-S2T2-EF	nsp

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POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CP504		nsp	CN.WAFER 2.0MM, 53014-0210 2P	nsp
L501		nsp	BEAD,COIL CHIP,HB-IT2012-121JT(CERATEC)2012	nsp
XTAL502		9965 000 11114	CRYSTAL, 14.7250MHZ CL=20pF HC49	*JX000810R
XTAL501		9965 000 11115	CRYSTAL, 24.0000MHZ CL=18pF HC49	*JX000820R
			FRONT CIRCUIT BOARD	
			FRONT -CAPACITORS	
C801		nsp	CER.CHIP,0.01µF-K/50V	nsp
C802		nsp	CER.CHIP,0.01µF-K/50V	nsp
C803		nsp	CER.CHIP,100pF-J/50V	nsp
C804 ∫ C807		nsp	CER.CHIP,0.1µF-K/50V	nsp
C808		nsp	ELECT,100µF-M/10V	nsp
C809 ∫ C816		nsp	CER.CHIP,0.1µF-K/50V	nsp
C817		nsp	CER.CHIP,220pF-J/50V	nsp
C818		nsp	CER.CHIP,220pF-J/50V	nsp
C819		nsp	CER.CHIP,220pF-J/50V	nsp
			FRONT -RESISTORS	
R801		nsp	CHIP,100-J 1/16W	nsp
R802		nsp	CHIP,100-J 1/16W	nsp
R803		nsp	CHIP,10K-J 1/16W	nsp
R804		nsp	CHIP,27K-J 1/16W	nsp
R805		nsp	CHIP,1K-J 1/16W	nsp
R806		nsp	CHIP,1K-J 1/16W	nsp
R807		nsp	CHIP,1K-J 1/16W	nsp
R811		nsp	CHIP,270-J 1/16W	nsp
R814		nsp	CHIP,1K-J 1/16W	nsp
R815		nsp	CHIP,270-J 1/16W	nsp
R817		nsp	CHIP,4.7K-J 1/16W	nsp
R820		nsp	CHIP,270-J 1/16W	nsp
R821		nsp	CHIP,270-J 1/16W	nsp
R827		nsp	CHIP,1.8K-J 1/16W	nsp
R829		nsp	CHIP,2.7K-J 1/16W	nsp
R831		nsp	CHIP,4.7K-J 1/16W	nsp
R832		nsp	CHIP,2.7K-J 1/16W	nsp
R833		nsp	CHIP,1.8K-J 1/16W	nsp
R837		nsp	CHIP,4.7K-J 1/16W	nsp
R840		nsp	CHIP,1K-J 1/16W	nsp
			FRONT -SEMICONDUCTORS	
D801		9965 000 10757	LED,ROUND,HL-50CDG	*HI100970R
D802		9965 000 10757	LED,ROUND,HL-50CDG	*HI100970R
D803		9965 000 10758	LED,ROUND, PI5-RD GR / HLD50RG DUAL	*HI100980R
IC801		9965 000 10762	IC,FL DRIVER, M66005FP-SOP64P	*HC107180R
Q801 ∫ Q804		9965 000 10753	CHIP.TRS. 2SC,KRC102S	*BA001220R
Z801		9965 000 11028	D,ZENER,MTZJ7.5B	*HD301980R
			FRONT -MISCELLANEOUS	
CN801		nsp	CN.FPC 1.0MM,52806-1910 19P STRAIGHT	nsp
PLATE801		nsp	BRACKET,SCREW	nsp
RM801		9965 000 10754	NJL64H380A / MODULE REMOTE	*HW100520R

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
S801 ∫ S812		9965 000 10761	SW,TACT,SKHV10920A	*SP001140R
S805		9965 000 10760	SW,TACT,THVH472GAA	*SP001150R
S808		9965 000 10760	SW,TACT,THVH472GAA	*SP001150R
S813		9965 000 10760	SW,TACT,THVH472GAA	*SP001150R

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